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A STUDY OF JOB CHARACTERISTICS OF
HONG KONG TEACHERS

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by

TAI Wai-sum

under the supervision of

Dr. CHENG Yin-cheong

A Thesis submitted to
Faculty of Education,
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in partial fulfilment of
the requirements for the
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CHAPTER 1. METHODOLOGY

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ABSTRACT

The aim of this study is to investigate the job characteristics of Hong Kong aided secondary school teachers. Teachers' job can be delineated into six work categories, namely teaching, extracurricular activity, guidance, discipline, administration and miscellaneous affairs in this study. Diversity in terms of work combination, time spent and degree of concern with these categories were observed. Teachers' job can also be described in terms of five job dimensions, namely task identity, task significance, skill variety, autonomy and feedback. These combined together to determine the motivating potential of teachers' job. Among the work categories, teaching was found to have the greatest and in fact quite high motivating potential score. However, job nature of the other five work categories seemed to dilute and thus lower the overall motivating potential of teachers' job. Some antecedents of the motivating potential score were identified. These include age, post, tenure in profession, tenure in the present school, marital status, major teaching level, and perceived school ideology strength. The motivating potential of teachers' job was found correlated significantly with teachers' behavioral outcomes in terms of job satisfaction, motivation, intention to change the school and intention to change the job. Growth need strength and school ideology strength were proved to be two distinct moderators of the above correlational relationships. Implications of the findings are made for practical administration and further researches.

CHAPTER 1. INTRODUCTION

In this chapter, the general background of the proposed study will be introduced. Based on the background, three research questions will then be formulated. The significance of the study will be discussed at the end.

A. BACKGROUND

Teachers are the frontier education practitioners. The quality of education is significantly determined by their effectiveness. Their effectiveness can be affected by various factors, one of which is teachers' job characteristics. As workers' job attitudes and job behaviours such as work performance are affected by workers' perception of the job characteristics (Hackman & Oldham, 1980); and the perceived job characteristics are directly affected by job design, studying perceived job characteristics through the perspective of job design is a reasonable and promising approach that may contribute to enhance teachers' effectiveness.

Teachers' work is quite heterogenous in nature. Generally speaking, teachers' work can be categorised into six aspects, namely teaching, extracurricular activities, discipline, guidance, administration and miscellaneous affairs according to the findings of a pilot study which will be mentioned in chapter three. Different teachers may be required to take up work from

different combinations of the above categories. The amount of time they spend on each work category may not be the same. They may also have different degrees of concern over each work category. The above differences can be interpreted as the difference in teachers' perception of their own work as well as their actual work behaviour. In other words, teachers may perceive their work in different ways, and thus resulting in differing work behaviour.

It is important to understand the factors that determine teachers' perception of their own work. It is because there have been researches indicating the positive correlational relationship between job perception and work behaviours such as internal work motivation, job satisfaction and work performance in some jobs (Hackman & Oldham, 1980). It is hoped that by doing so, the school can enhance an effective design and allocation of teachers' work, and induce desirable behavioral outcomes of the teachers.

In the past twenty years, there have been a lot of changes in the education field of Hong Kong. These changes not only influence the tertiary education sector, the Education Department, the schools, the school management boards, the principals and the teachers, but also affect teachers' work. The following are some typical changes in the education field that may influence teachers' work. Since the implementation of the nine-year free compulsory education, the average academic standard of students seems to have declined. Teachers, therefore, need to put more effort in teaching the students. Those students who cannot catch up with the academic work may

create troubles in schools. Many disciplinary problems thus arise (Hong Kong Government, 1990). Teachers have to tackle these problems, resulting in a burdened workload. Moreover, providing guidance to students has become more and more urgent, especially when the number of student suicidal cases is on the increase. Teachers are urged to counsel their students and to keep close contact with their parents. Furthermore, teachers have to do more and more clerical work. The workload of teachers is, as a result, increased a lot.

The new tertiary institutions admission scheme brings about immense effects on teachers' work. Since the introduction of the Joint University and Polytechnic Admission System (JUPAS) which enables students to apply for admission to the six institutions in Hong Kong funded by the University and Polytechnic Grants Committee, careers masters/mistresses and senior form teachers need to provide guidance to students in planning and choosing their future study programmes. Besides, teachers have to place greater emphasis on preparing students for the Certificate Examination because it is the result of this examination that determines the chance of getting the priority to enter the institutes that students desire. On the other hand, curriculum changes arise as well. These changes require teachers to do more work in terms of both quantity and variety. The Advanced Supplementary Level syllabuses will be introduced in 1992 and the syllabuses of the Advanced Level subjects will also have to be trimmed down. Teachers may then need to learn new subject matter and adopt new teaching strategies. Coupled with it, the government plans to expand the number of tertiary places of

degree courses gradually from the present 7% to 18% by 1995. In response to the above policy, additional form six classes were established in some schools in 1991. At the same time, new guidelines of admitting form six students were implemented to ensure that all form six places are filled in every school. These policies and changes imply that, on the average, the academic standard of the form six students will probably be lowered. Teachers, the frontier educators, will encounter more difficulties than before.

Meanwhile, the recent release of a government document, The School Management Initiatives (Education and Manpower Branch and Education Department, 1991), calls for an extensive reform in the management and running of the schools. A more explicit role of teachers in school management will be expected. As suggested in this document, teachers, especially the senior ones including the panel heads and the committee convenors, are expected to participate more in school planning and management work in future.

Above all, the important point to note is the speed of the changes. The speed is often so high that both schools and teachers find it rather difficult to adapt themselves to the changes.

Four trends of change in the nature of teachers' job can be observed. First, the work of teachers changes from specific and unique to more general and extensive. In the past, a good teacher might be the one who could teach the subject matter well. Today, he must also be a good counsellor as well as a skilful discipline controller. Secondly, together with greater

requirement of various skills, a greater emphasis will be put on teacher education. Indeed, school-based in-service education and training has been called for (Pang, 1991). Furthermore, an extensive evaluation and suggestion of teacher education will be announced in the coming Education Commission Report No.5. Thirdly, teachers can no longer work alone if work effectiveness is to be achieved. School-based curriculum development, and whole school approach to guidance and discipline are called for. Team teaching (prepare teaching material and discuss teaching strategy together) is often found in many schools. Fourthly, teachers need to encounter a much more complex social environment, instead of confining their work in the classroom and the staff room. More teachers are expected to participate in the school management at different levels. Teachers are required to report their work to the parents and the public. In sum, teachers are expected to master a variety of skills, to be well and continually trained, to work as a team, and to be accountable to the public. Teachers' work is, therefore, certainly not an easy task; rather, it is challenging.

Teachers' work is related to teachers' organizational behaviour such as work performance, thus determining the effectiveness of the school. A trend can be observed that teachers are required to perform duties of greater variety and intensity. These changes may lead to good or bad effects on their work. Cooke and Stimpson (1991), after having reviewed the worldwide changes in the education system of the past twenty years, concluded that teachers' work is now in a very critical position. The effectiveness of education relies very much on

their work. Therefore, teachers' work must be closely monitored and the effect of educational changes on it must be noted. To evaluate the relationship of the educational changes and teachers' work, a comprehensive understanding of the present nature of teachers' work must firstly be researched. However, no study has been made on the detailed nature of teachers' work in Hong Kong. It is the time to fill such gap. Furthermore, even if there is not any change in the environment for education, we still need to study teachers' work. It is important to teacher trainers that they can tell student teachers precisely what the nature of the teaching career is. It is important to school administrators that they can design and allocate duties to their subordinates. It is important to teachers that they can make improvement and reform on their own work. In short, the environment for education is changing. It is the great changes in the environment for education that generate new expectations and demands on schools. The change in the role of schools causes the change in the roles of teachers. To cope with the demand stemmed from the changes, the nature and content of teachers' work must be changed accordingly. To evaluate teachers' work in future and design teachers' work today so that teachers can perform more effectively, a thorough investigation on the nature of teachers' work is needed now.

As teachers are the frontier practitioners in everyday education processes, their perception of their own job cannot be neglected if we want to upgrade the effectiveness of the schools. Understanding their work itself and their perception on their work helps the education administrators to redesign and

redistribute teachers' duty. A good design of job may 'generate' highly motivated, happy and effective teachers. Moreover, the problem of teacher quitting in recent years may also be alleviated (Wong, 1990; 鍾, 1990) as job satisfaction is correlated to the intention to quit the job negatively. It should be noted that teachers' perception on their work can be affected by both personal and environmental factors. Teachers of different personal attributes may perceive the same job differently and the school environment as a whole may probably determine a lot of one's job perception.

To understand teachers' job perception, Job Characteristics Theory (Hackman & Oldham, 1980) is a good theoretical perspective to refer to. Job characteristics approach to job design has got a lot of attention in the western world since the 1970s. It is originally a theory of job design, which is also very useful in describing and classifying jobs. Job characteristics theory basically assumes that highly motivating jobs can arouse a worker's internal work motivation, make him happier and encourage him to perform better. In doing such a job, the growth need of the worker will be satisfied. Based on this theory, an instrument called Job Diagnostic Survey (Hackman & Oldham, 1975) was developed. It is widely used in business administration consultation. The instrument measures the job holders' perception of their job in terms of five core job dimensions, namely skill variety, task significance, task identity, autonomy and feedback. The nature of perceived teachers' work can also be analyzed in this perspective. Practically, the job characteristics theory concerns the relationship between the five

core job dimensions and workers' affective outcomes such as general job satisfaction and internal work motivation; this relationship is also the concern of education administrators. Thus the present study adopts the job characteristics theory (Hackman & Oldham, 1980) as the conceptual tool to analyze the nature of teachers' work in Hong Kong. Since it was found that perception of job characteristics is more important than the objective nature in predicting various work and personal outcomes (Hackman & Lawler, 1971; Hackman & Oldham, 1975; Caldwell & O'Reilly, 1982; Spector & Jex, 1991), the 'perceived job characteristics' in terms of five core job dimensions will be the key concept studied. Teachers' work can also be analyzed by content according to different work categories. These categories will be studied together with the perceived core job dimensions. A matrix formed by the core job dimensions and the work categories may shed more light on the understanding of the nature of teachers' work. Different teachers, in different environments, may perceive their job differently; therefore, the antecedents related to job characteristics will be investigated in terms of personal attributes and environmental factors. Furthermore, the behavioral outcomes such as general job satisfaction, internal work motivation and intention to quit the job that are associated with job characteristics, and the moderating factors affecting the above relationship will also be studied. The theory can thus be validated and applied in educational administration. It is hoped that this research can give hints to the ways to enhance teachers' internal work motivation, general job satisfaction, and to reduce their

intention to quit the job.

In sum, this study intends to study the perceived job characteristics of teachers in Hong Kong secondary schools. The associated antecedents and consequences of the perceived job characteristics will also be explored.

B. RESEARCH QUESTIONS

The research questions proposed to be studied are as follows:

1. How do teachers perceive their job in terms of work categories, concern, time allocation, and motivating potentials?
2. How are teachers' personal attributes and school's organizational ideology related to teachers' perception of job characteristics?
3. How are perceived job characteristics related to teachers' affective outcomes in terms of job satisfaction, internal motivation and intention to quit their job?

C. SIGNIFICANCE OF THE STUDY

This research allows a comprehensive understanding on teachers' perception of their work. Although teachers' work in Hong Kong seems homogenous superficially in terms of working

conditions, reward and management pattern (Cheng, 1990), the perception of the objective nature of work can still be greatly diversified (Naughton & Outcalt, 1988). Such diversified perception on work may induce different reactions in different teachers. Therefore, the principals must manage different teachers in different ways. To design jobs for different teachers, one may reallocate the duty, generate and/or enhance a good school climate or improve the conditions that motivate teachers. Hints for a good practice are hoped to be available in the findings of this study.

Making teachers' job more challenging may be a way to enhance internal work motivation and general job satisfaction of teachers. A self-motivated and happy teacher may have better work performance. Furthermore, if general job satisfaction can be increased by increasing the 'motivating potential' of the job as mentioned in the job characteristics theory, the serious problem of teacher turnover (Wong, 1990) may also be solved. It is noted that job satisfaction is generally not high for the employees of many human service organizations (Glisson & Durick, 1988). Job satisfaction of teachers in Hong Kong is not high as well (Wong, 1989). Absence of job satisfaction is a prominent reason that many teachers left the profession (鍾, 1990). Therefore job satisfaction is a research field that can lead to practical usage to alleviate the problem of teacher shortage in Hong Kong. Indeed, in order to solve the problem of teacher turnover or shortage, increasing intrinsic reward to satisfy teachers is always considered to be a promising solution. Extensive evidence that teachers regard professional efficacy,

not money, as the primary motivator in their work was noted (Johnson, 1986; Cartledge & Halverson, 1989). In short, varied and challenging work may relate to desirable behavioral outcomes including internal work motivation and general job satisfaction. Problem of teacher turnover may be alleviated by the increase in general job satisfaction.

In the past, growth need strength was often studied as a moderator moderating the relationship between job characteristics and worker outcomes. In this study, environmental moderating effect was investigated in addition. In fact, integrating environmental moderator in the model has long been called for but the number of empirical researches dealing with it is still small. School organizational ideology in terms of its strength, not the content, is chosen as a potential environmental moderator in this study so that this dimension of research can be explored empirically.

Finally, this study can be regarded as a test of the job characteristics model in the Chinese culture. The traditional concept of teaching job in Chinese culture is expected to be different from that of the western culture.

CHAPTER 2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

In this chapter, categories of teachers' work will be discussed at the beginning. The job characteristics theory, the theoretical basis of the present study, and some other approaches to job design will then be reviewed. Based on the literature, the conception of the study will be developed at the end of the chapter.

A. CATEGORIES OF TEACHERS' WORK

Teachers' work can be understood as a particular labour process. Its definition can expand almost without limit, and the work could be intensified indefinitely (Connell, 1985, pp.69-86). The expectation on teachers' work varies according to the view points of the society, the schools, the teachers and even the students. Even if consensus can be arrived at on what the content of teachers' work should be, the degree of concern on the various aspects of teachers' work still cannot be expected identical among different bodies.

Nevertheless, broadly speaking, teachers' work can be categorised into teaching duty and non-teaching duty. The latter can be further divided into with or without supervisory work. Supervisory work includes those work related to particular subjects, administration of the school as a whole and other duties such as counselling and extra-curricular activities (Connell,

1985, pp.69-86). Hoyle (1975, pp. 36-57), from sociological points of view, pointed out that in an industrialized society, teachers' work can be divided into instruction, selection and socialization. However, teachers' roles are open to many pressures and conflicts which arise from the changing social functions of education, which in turn stem from economic and social changes. In particular, the instructional and selective functions of teachers have grown in importance whilst their socializing function has become more difficult. Teachers' work are becoming more technical and specialized. Within the teaching profession, teachers' work are differentiated according to authority, function, personal attributes such as age, sex, qualifications, and informal social status. These generate different sets of expectations. Different schools have different patterns of distribution of power and authority among their staff. Within a school, teachers with different personal attributes perceive their work in different ways.

The content of work of form master/ mistress can give some hints on defining teachers' work. Such duty includes understanding and knowing the students, organizing the class association and promoting class activities, coordinating with other teachers and parents, evaluating extensively the conduct of students and acting as a good ethical model (張等, 1990).

The nature of teachers' work can also be understood by looking at how their work is evaluated. A performance objectives approach uses the following responsibility criteria to evaluate teachers: planning and organizing, motivating learners, utilizing resources, instructional technique, professional growth and

responsibility, and relationships with parents. For each area of responsibility, more concrete points are further broken down (Redfern, 1980, pp. 21-23, 43-47).

Lieberman (1984, pp. 1-15) concluded that teachers' work reflects the interplay between individual teacher experiences and the social context of schools. The following is a set of descriptions he used to describe teachers' work: style is personalized; rewards are derived from students; teaching and learning links are uncertain; the professional knowledge base is weak; goals are vague and conflicting; control norms are necessary; professional support is lacking; and teaching is an art.

In sum, teachers' work is determined and defined by the expectations of the society, the schools and the teachers concerned. Many aspects of the society such as economy and culture may change; the school policy and tradition may be different in different schools; and attributes and experiences of the teachers may not be identical. The society as a whole and the schools in particular lay various expectations on teachers' work while teachers themselves may integrate the various expectations and redefine their work in different ways. Thus it is hard to get an absolute consensus among teachers on the nature of their work. The definition of teachers' work made by different teachers can be reflected by their work perception. It is therefore worthwhile to investigate how teachers perceive their work.

B. THE JOB CHARACTERISTICS THEORY

The job characteristics theory is an important approach in studying teachers' work. In this section, the theory will be described firstly in a context of its historical origin and development. Then various aspects and controversial issues of the theory and the related studies will be reviewed. The view emphasising person-environment fit will be presented as well.

HISTORICAL ORIGIN AND DEVELOPMENT

Since the prevailing of the scientific management approach in the nineteenth century, researchers tried to simplify jobs so that work can be carried out more efficiently, less-skilled employees would be required; the control of management over production would be increased; and, ultimately, organizational profits would be enhanced. In the 1950s, it was found that job simplification unfortunately led to employee dissatisfaction, increased absenteeism and turnover, and substantial difficulties in effectively managing employees who work on simplified jobs (Hackman & Lawler, 1971).

After the second world war, following the emergence of behavioral science studies, various theories related to job design appeared in the field of management. The job characteristics theory is one of these job design theories. It is established to analyze and design jobs. Job characteristics are found related to some attitudinal and behavioral outcomes including work performance, general job satisfaction and internal

work motivation.

The job characteristics theory has its root traced back to Herzberg's (1966) motivation-hygiene theory and Maslow's (1943) need hierarchy theory. After having conducted a number of researches, the theory was formally established by Hackman and Oldham (1980).

The motivation-hygiene theory (Herzberg, 1966) states that employee motivation can be enhanced by providing opportunity in job achievement, recognition, responsibility, advancement and growth in competence. Turner and Lawrence (1965) made the measurement of job characteristics with respect to the above motivators explicit. They developed operational measures of six "requisite task attributes". These are variety, autonomy, required interaction, optional interaction, knowledge and skill required and responsibility. These attributes can be summarised by a measure called the Requisite Task Attribute Index (RTA Index). However, the RTA Index was found able to predict only the reactions of workers from factories located in small towns, not for urban workers. Cultural background at first was suggested by Lawrence as the moderator moderating the relation between job characteristics and employee reactions. However, it was found that even cultural effect could not account for the differences in reactions of the individuals who shared the same cultural background. Therefore, it was proposed that individual's own characteristics must be taken into account. Later on, Hackman and Lawler (1971), based on the expectancy theory (Vroom, 1964), made conceptualization on the interaction of job characteristics and individual differences. In advanced

countries, such as the United States, since the lower order needs corresponding to the bottom two levels of Maslow's (1943) need hierarchy (i.e. physiological need and safety need) are often easily satisfied, researchers conceptualized individual differences mainly on the higher order needs strength (i.e. the extent that a worker feels the need for the top three levels of Maslow's need hierarchy - social need, self esteem need and self actualization need). In job design, Hackman and Lawler found that when jobs were described high on the four core job dimensions (autonomy, task identity, skill variety and feedback), employees who were desirous of higher order need satisfaction tended to have high motivation, have high job satisfaction, be absent from work infrequently, and be rated by supervisors as doing high quality work. Later on, Brief and Aldag (1975) partially replicated the model empirically using a different kind of population. Following this trend of research, Hackman and Oldham (1975) developed an instrument called Job Diagnostic Survey, JDS, to measure job characteristics; and the famous job characteristics model or job characteristics theory was proposed. Jobs were described in five core job dimensions, with 'task significance' as the additional one. The essence of the theory is that employees will react positively to highly motivating or enriched work which is defined in terms of scoring high on the five core job dimensions (i.e. skill variety, autonomy, task significance, task identity and job feedback) stated in the theory. Desirable behavioral outcomes such as better performance, higher internal work motivation, greater general job satisfaction and less absenteeism should be expected in doing an

enriched work.

DESCRIPTION OF THE JOB CHARACTERISTICS THEORY

The job characteristics theory aims at analyzing and diagnosing jobs. It can be used to compare and classify jobs. Practically, it is used to diagnose job so as to redesign job and evaluate the consequence of job change. The theory centres on intrinsic reward of the job itself. The job characteristics model can be represented by Figure 1 (Hackman & Oldham, 1980).

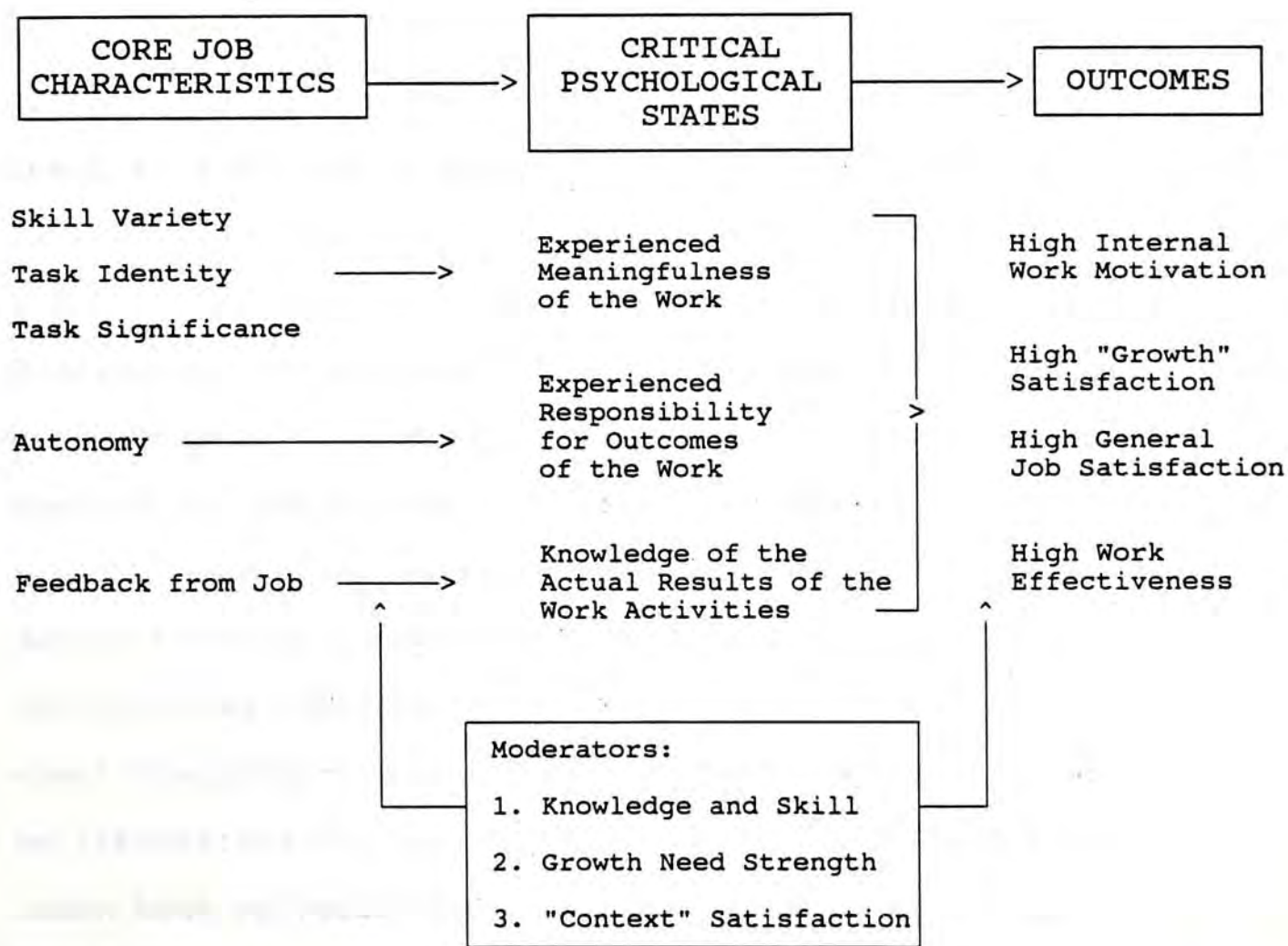


FIGURE 1. Outline of Job Characteristics Model.
Adapted from Hackman & Oldham (1980)

There are five core job dimensions shown in the left column. The three characteristics of jobs that are especially powerful in influencing the experienced meaningfulness of work are skill variety, task identity, and task significance. Skill variety is the degree to which a job requires a variety of different activities in carrying out the work, involving the use of a number of different skills and talents of the person. Task identity is the degree to which the job requires completion of a whole, identifiable piece of work -- that is, doing a job from beginning to end with a visible outcome. Task significance is the degree to which the job has a substantial impact on the lives of other people, whether those people are in the immediate organization or in the world at large. The characteristic that leads to feelings of personal responsibility for work outcomes is autonomy. Autonomy is the degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out. Finally, knowledge of results of one's work is affected directly by the amount of feedback one receives from doing the work. Job feedback is the degree to which carrying out the work activities required by the job provides the individual with direct and clear information about the effectiveness of his or her performance. It also can be informative to combine the five characteristics into a single index that reflects the overall potential of the job environment to foster motivation and satisfaction on the part of job holders.

The experienced meaningfulness of the work, the experienced responsibility for outcomes of the work and the knowledge of the

actual results of the work activities are the three corresponding psychological states which are affected by the core job dimensions. Skill variety, task identity and task significance together determine one's experienced meaningfulness of the work. The greater these variables are, the higher the level of meaningfulness is experienced. Their effect is in additive manner. Autonomy determines the experienced responsibility for outcomes of the work. The greater the autonomy, the greater the felt responsibility. Feedback from job determines the knowledge of the actual results of the work activities. More feedback generates more knowledge. The three psychological states are, by definition, internal to persons and therefore not measurable properties of jobs. They will not be analyzed in this study.

Outcomes are shown in the right column of Figure 1. High work effectiveness is a desirable performance outcome resulted from positive critical psychological states. High internal work motivation, high "growth" satisfaction and high general job satisfaction are all affective responses one has when he experiences meaningfulness of the work, feels responsible to the outcomes of the work and knows the actual results of the work activities. Internal work motivation and general job satisfaction will be investigated in this study. Intention to quit the job will be added as an outcome too.

Moderators are those personal characteristics which interact with the core job dimensions to influence the critical psychological states and they also interact with the critical psychological states to influence the outcomes. First, employees must have sufficient knowledge and skill to perform the work

effectively (Hackman & Oldham, 1980). Secondly, psychological needs can be critical in determining how vigorously a person will respond to a job high in motivating potential (Hackman & Lawler, 1971; Hackman & Oldham, 1976). Those people with strong needs for personal growth and self-direction at work are most likely to appreciate and respond enthusiastically to the opportunities for personal accomplishment provided by a job high in motivating potential. Finally, job characteristics theory predicts that employees' reactions to jobs of high motivating potential are also affected by their satisfaction with various aspects of the work context (e.g., pay, job security, co-workers, and managers) (Oldham, Hackman, & Pearce, 1976). In sum, only people who are sufficiently competent to perform the work, desirous of growth satisfactions at work, and relatively satisfied with the work context are predicted to prosper on work that is high in motivating potential score which is the composite measure of the five core job dimensions (the method of computation will be described later). The higher the scores in all five job dimensions are, the higher the motivating potential score is.

A comprehensive test of the theory using Job Diagnostic Survey has been conducted by Hackman and Oldham (1976). The theory was tested for 658 employees who worked on 62 different jobs in seven organizations. The rest of this paragraph presents some of the findings. The psychological states were found generally correlated higher with outcomes than job dimensions. The motivating potential score was found related more strongly to outcomes than any of its component job dimensions, but the relationships with absenteeism and performance were not as strong

as expected. All the three psychological states were found necessary to maximize the prediction of the outcome measures. The psychological states were found mediated between job characteristics and outcomes, but somewhat less for feedback and for autonomy. The growth need strength was found moderated both between the job characteristics and the psychological states, and between the psychological states and the outcomes. The validity of the job characteristics model was thus generally supported. However, it was also noted that the relationships involving affective measures might be inflated. Autonomy was observed the least independent of the five job dimensions. It, in part, might summarize the overall complexity of a job, and therefore has a greater diversity of effects than did the other job dimensions. The motivating potential score was supported as the summarised measure of job characteristics. Nevertheless, additive forms and some other alternative forms of computation seemed even more adequate.

Many researches were conducted later to investigate Hackman and Oldham's findings. Schmitt and Fitzgerald (1979), by detecting the expected between groups mean differences in perceived job characteristics with reference to the size of organizations, size of work groups and status of jobs, found overall support of the construct validity of the Job Diagnostic Survey. Wall, Clegg and Jackson (1978) closely replicated Hackman and Oldham's (1976) survey, choosing only blue-collar manual workers, who were not well educated, as the subjects. Although the sample was a homogenous group in contrast with the original well diversified ones, the results obtained were quite

similar to that of the original study. However, they concluded not to accept the validity of the model since some theoretically expected relations were not confirmed. Furthermore, having reviewed a number of relevant studies, Roberts and Glick (1981) found substantial inconsistencies across the theory, operationalizations, analyses and interpretations. Glick, Jenkins and Gupta (1986), though observed empirically substantive relationships between job characteristics and effort which supported the job characteristics model, they also found that the relationships were inflated by the common method effects due to self-reported data. On the contrary, Fried and Ferris (1987) supported the validity of job characteristics model through a very comprehensive review as well as meta-analysis on nearly 200 relevant studies. They found that the available correlational results were reasonably valid and job characteristics were related both to psychological and behavioral outcomes. Using suitable statistic tools, they concluded that most cross-study variance found was due to statistical artifacts only. That means the real variance across the studies is not great. In addition, they found that multidimensionality of job characteristics was supported, but there was less agreement on the exact number of dimensions. Based on their review, the job characteristics model was confirmed generally.

Most researches focused on the interacting effect of the core job dimensions and the moderators (in particular, the growth need strength) on the employee outcomes. However, the critical psychological states were left untouched. Furthermore, Roberts and Glick (1981) criticized that most researches did not consider

contextual characteristics of jobs; and actual job change often did not get involved.

The most popular instrument used in describing and diagnosing jobs is the Job Diagnostic Survey (JDS) developed by Hackman and Oldham (1975). Many controversial problems were tackled in the literature with reference to this instrument. Three issues are comparatively hot. These issues are concerned with the number and nature of dimensions of job characteristics, the composite measure of job complexity score, and the nature and legitimacy of the self-report measure in contrast to the objective job characteristics.

DIMENSIONALITY AND COMPOSITE INDEX

Dimensionality

The root of Job Diagnostic Survey can be traced back to the Yale Job Inventory (YJI) constructed by Hackman and Lawler (1971). In that instrument, only four job dimensions, namely task identity, skill variety, job feedback and autonomy, were recognized. In Job Diagnostic Survey, an additional dimension, task significance, was introduced. However, many researchers arrived at mixed results concerning the number and nature of the dimensions of job characteristics.

In the original work of Hackman and Oldham (1975), a moderately well convergency in most dimensions across the ratings of the workers, supervisors and researchers was found. Subscales in Job Diagnostic Survey were moderately positively correlated,

with generally satisfactory internal consistency and reliability. Kiggundu (1980) found Job Diagnostic Survey valid and reliable through an empirical research on multiple ratings of 364 incumbents, immediate supervisors and coworkers. Lee and Kleins (1982), after having conducted an investigation on 1632 government employees, also supported generally the a priori dimensionality of the Job Diagnostic Survey.

On the other hand, some researchers suggested different number of dimensions. One suggestion was that there are only four dimensions. Aldag et al. (1981) and Miner (1980) found skill variety and autonomy seem empirically overlapped. Naughton and Outcalt (1988) opined that autonomy and variety of skill could represent worker's input in the working process while task identity and task significance are closely tied to outcomes of worker's effort. A study on job characteristics model in Hong Kong (Birnbaum, Farh & Wong, 1986) also found that four dimensions is a better description on job characteristics in 57 jobs.

A three-factor dimensionality was found as a better description of job in Fried and Ferris' (1986) investigation of nearly 7000 employees and 900 jobs in an overall sense. In addition, they found that position level in the organization, age and education level of the incumbents significantly affected their perception of job characteristics. People of the managerial, young and highly educated categories supported the five factors solution. However, among those non-managerial personnel, older people and those with lower level of education, four, three or even two-factor structures were reflected. Stone

and Guetal (1985) also supported a three-factor solution, but with different names of dimensions.

Harvey, Billings and Nilan (1985), using two different statistical analysis methods, found the original five-factor solution and one-factor solution should be accepted respectively. Actually, single general factor solution in job characteristics has been documented in Dunham's study (1976). Dunham showed by factor analysis that skill variety and autonomy were not empirically different and a single dimension seemed most parsimonious. In fact, autonomy was the least independent dimension out of the five core job dimensions in Hackman and Oldham's (1976) study. It might summarize the overall complexity of a job and had a greater diversity effects than did the other dimensions. Furthermore, job complexity, one of the three dimensions concluded by Stone and Gueutal (1985), seemed to be a summarized description of the five hypothesised dimensions; this thus supported Dunham's view of single parsimonious dimension.

Idaszak and Drasgow (1987), having conducted factor analyses on two sub-samples of employees from Oldham et al's (1978) database, discovered six-factor solutions for both samples. However, five out of the six factors corresponded to the hypothesized factor structure and the sixth one represented the negative worded, reverse-scored Job Diagnostic Survey items. After rewritten the problematic items, good fit of a five-factor structure was obtained in their study. A response to this study was soon made by Kulik, Oldham and Langner (1988). They conducted a comparison of the original and the above revised Job

Diagnostic Survey. The sample consisted of 224 dairy workers who completed both Job Diagnostic Survey versions. Through confirmatory factor analysis, they found the revised one really conformed more closely to the hypothesized five-factor structure; but only with similar usefulness in predicting satisfaction, internal motivation and productivity.

Graen, Scandura and Graen (1986) concerned only the composite score of all the dimensions. They suggested that growth opportunity in terms of increase in motivating potential score should be studied instead of the motivating potential score itself. In their study, growth opportunity was found interact well with growth need strength, the well documented moderator, in predicting affective outcomes of workers.

It is worthwhile to note that feedback was a rather problematic dimension in the model. Among the four dimensions described by Hackman and Lawler (1971), ratings among employees, supervisors and researchers significantly correlated in only the rest three core job dimensions, but not in feedback. Hackman and Lawler suggested that it might be that different people attended to different aspects of the feedback process. The crucial condition was that feedback has to be present in a form that was believable to the workers. Actually in Job Diagnostic Survey, two supplementary sections ('feedback from agents' and 'dealing with others') were included to get more related information. It showed that the theory itself also considered that a greater scope of feedback and interaction with other people should be considerably important. In fact, in Hackman and Oldham's (1976) study, psychological outcomes were found mediated between job

characteristics and outcomes, but somewhat less for feedback as well as autonomy. Wall, Clegg and Jackson (1978), having replicated Hackman and Oldham's study, similarly found insignificant moderation of 'knowledge of results', the critical psychological state expected closely related to feedback. In a multiple rating study (Kiggundu, 1980), though Job Diagnostic Survey was validated in general, significant discrepancy between ratings of feedback from supervisors and incumbents was observed, with the supervisors' ratings significantly higher. Because of the multiplicative nature in calculating motivating potential score, an even greater discrepancy in motivating potential score was resulted. Becker and Klimoski (1989) found that holding other feedback variables constant, feedback from supervisory/organizational sources was related to reported job performance, while feedback from peers and self was not. They also found in their study that higher and lower performers did not differ in the amount of feedback received, but higher performers did receive significantly greater amount of positive feedback. The implication of their study was that the nature of feedback was much more important than the amount of feedback.

Literature from feedback study not related to the job characteristics model could also shed light on the issue of feedback. Greller and Harold (1975) suggested there were different sources of feedback. Ilgen et al. (1979) urged the need of researching the effect of the frequency of feedback. They suspected that the increase of feedback frequency might even be detrimental to performance. The above issue was empirically investigated by Chhokar and Wallin (1984). They followed 58

employees of a heat exchanger manufacturing and repairing plant for 10 months and found that more frequent feedback (once per week) was as effective as less frequent feedback (once per two weeks) on improving safety performance. Having reviewed a number of studies on feedback classification, Herold and Parsons (1985) proposed a '2x3' format of feedback taxonomy. According to the sources, feedback can be categorised into three kinds: organizational and supervisory communications, co-workers, and task or self-feedback. Becker and Klimoski's (1989) found that feedback from students, co-workers, principal and self were all important to teachers. According to the sign, feedback can be distinguished into positive or negative types. In a laboratory study, Ilgen and Moore (1987) found that feedback information had the greatest effect on those task behaviours that most closely matched the feedback. In similar sense, Ashford and Cummings (1983) maintained that feedback was a personal resource that individuals actively monitored and then selected when the feedback was perceived to be valuable for reaching performance goals. Thus feedback is useful to enhance desirable behavioral outcomes only when it is accepted and perceived to be constructive by the employee.

Since no strong rationale supporting how many dimensions can be found in the context of teachers' work, the present study basically takes for granted the original five-factor dimensionality. As mentioned before, Becker and Klimoski (1989) found that feedbacks from the principal, colleagues and students all are clearly important to teachers' feeling of their job. Therefore, in this study, feedback includes feedback from the job

itself as well as feedback from other relevant people. This is a small modification of the theory in the conception of the present study.

In sum, teachers' work does contain quite different aspects; therefore, studying of the nature of their work based on the job characteristics model should be of great significance.

Composite index

The overall representation of the perceived job characteristics was reflected by a composite score. In Job Diagnostic Survey, it is called the motivating potential score, MPS, which is calculated in a multiplicative way shown below.

$$\text{MPS} = \frac{\text{Skill variety} + \text{Task identity} + \text{Task significance}}{3} \times \text{Autonomy} \times \text{Feedback}$$

However, criticism was made that the algorithm for computing motivating potential score did not have strong theoretical base (Roberts & Glick, 1981).

Other people have suggested weight additive and simple additive method to calculate the score instead. It has been reported that the simple additive index was similar to (Dunham, 1976), and even seemed better than the multiplicative one in predicting the outcomes (Hackman & Oldham, 1976). On the contrary, an opposite conclusion that the multiplicative computation was more appropriate was reported by Ferris and

Gilmore (1985). A meta-analysis conducted by Fried and Ferris (1987) indicated that motivating potential score had stronger relationships with the psychological states and work outcomes than any of the individual job dimensions did; while the conclusion of whether multiplicative or additive computation is better is still controversial. Such inconsistency among researches suggests that the theoretical base for the algorithm is not strong.

In the present study, the multiplicative formula for computing the motivating potential score will be adopted just because it is the original version of the theory.

SUBJECTIVE VERSUS OBJECTIVE MEASURES

The most frequent attack laid on Job Diagnostic Survey is that the objective task characteristics are masked because of the subjective self-reporting nature of the instrument. It is thus difficult for the job designers to plan changes in the objective job characteristics to induce the desirable job outcomes. Furthermore, common source of variances causes the inflation of the relationship between job characteristics and affective outcomes (Roberts & Glick, 1981; Birnbaum et al., 1986); even Hackman and Oldham (1976) did not deny this weakness. However, responses to this criticism have been made. First, it is the perceived job characteristics which are important for each individual worker and it is such perception that better correlates with workers' attitudes and behaviours, not the objective job characteristics (Hackman & Lawler, 1971; Hackman

& Oldham, 1975). Perceived job characteristics are the cognitive representations of job attributes that reflect the psychological meaning and significance of these attributes to individuals (James and Tetrick, 1986). James and Jones (1980) also found strong empirical support from investigating 642 non-supervisory employees that individuals responded to perceptions of environment, not the environments per se. Caldwell and O'Reilly (1982), in a field study of 88 retail representatives, found that although they did the same job, different perceived job characteristics were identified; and such perceptions were found significantly related to job satisfaction. Secondly, convergent validity have been demonstrated between the subjective and objective measures. In Algera's (1983) investigation of 61 mainly blue-collar jobs of Dutch steel industry, a substantial convergence in the patterns of correlations between job characteristics and responses in two forms of measurement (from job performers and non-performers) was found. Convergent validity have been demonstrated also between the subjective (JDS) and objective (JRF) measures (Oldham, 1976; Fried & Ferris, 1987). A median correlation of 0.63 was also found in Fried and Ferris' (1987) meta-analysis. They concluded that both laboratory and field studies have tended to show the expected linkage between objective task manipulation and its perception by people. Moderate to good overlap was found between ratings of job characteristics made by incumbents and those made by others including peers, supervisors and observers. Using statistical method, they found that perceived job characteristics did correlate better with outcomes in addition to the effect

attributed to self-reported data. A recent study on state civil service employees of the University of South Florida also found moderate correlation among the self reported data of the incumbents, the ratings of other raters and the information from Dictionary of Occupational Titles. However, real correlation was found only between perceived job characteristics and satisfaction, and between perceived job characteristics and turnover intention (Spector & Jex, 1991). The study of perceived job characteristics is thus meaningful and can be well justified.

In the present study, Job Diagnostic Survey is seen to measure subjective or perceived job characteristics in line with the above discussion.

ANTECEDENTS, CONSEQUENCES AND MODERATORS

Antecedents

People often try to make sense out of the environmental cues. Such cues, together with the incumbents' personal characteristics, affect the perception of job characteristics.

Different researchers identified different influential factors. These factors include age, educational level, position level, income, tenure in the unit, father's income, attitude toward other professions, level of job satisfaction and job's skill requirement (Fried & Ferris, 1987). James and Jones (1980) found level of job satisfaction of an employee could affect his perception on job characteristics. Also, Caldwell and O'Reilly (1982), in a role play experiment, discovered that

satisfied students of Master in Business Administration perceived job more enriched than the dissatisfied students did. It seems at this point confusing because job satisfaction mentioned here is regarded as an antecedent of job perception, instead of its consequence. More discussion on this will follow later in this chapter. Kraiger et al. (1989) found affective state (positive or negative mood) could affect both task perception and job satisfaction. Ellis (1988) pointed out that teachers with higher needs for growth and achievement saw job of greater significance. James and Jones (1986) found workgroup structure influenced job perception. Ellis and Berhardt (1988) noted that teachers who perceived supervisory behaviour as encouraging growth, supportive and non-threatening would have more positive perceptions on the job dimensions. Organizational structure were influential to job perception too (James & Jones, 1980; Petelle & Garthright-P., 1985). Fried and Ferris (1986) found both personal and situational factors, in terms of age, education and position level, influenced the employees' ability to differentiate job characteristics. In their study, more educated, younger and higher rank people could differentiate five job dimensions; while those less educated, older and lower rank workers could differentiate only four, three or even two job dimensions. Apart from demonstrating the antecedents of job perception, these findings might also shed light on the discrepancy in studies on dimensionality. Job perceptions are also strongly influenced by social cues, informational influence, changing needs, and the job incumbent's frame of reference (Birnbaum, Farh & Wong, 1986). In addition to the above discussion, the objective job

characteristics themselves surely must not be neglected.

Examination of tasks in their environment has long been called for (Pierce & Dunham, 1976). Organizational culture is a general description of the environment. Organizational culture contains substance and form. Substance refers to the networks of meanings contained in its ideologies, norms, and values. Form refers to the practices whereby these above meanings are expressed, affirmed, and communicated to members in the organization (Trice & Beyer, 1984). However, little has been done with reference to organizational culture in the research field of job characteristics.

In the present study, organizational ideology, a proxy construct for organizational culture as a measure of the general environment, will be treated as an independent variable affecting the outcomes concerned. There will be more discussion on organizational culture and organizational ideology in the latter part of this chapter.

Consequences

Many outcomes have been correlated with job characteristics in various studies. These include job satisfaction, internal work motivation, work effectiveness, job involvement, absenteeism, intention to quit the job, job frustration, anxiety at work, health symptoms and frequency of doctor visits. Most researches have focused on job satisfaction. Performance and motivation also have received much attention; while intention to leave the job has received only limited concern.

Hackman and Oldham (1975), Oldham (1976) and Brief and Aldag (1975) all found researches generally supported the expected prediction of outcomes drawn from the job characteristics model. Job satisfaction was often predicted very well.

There are a number of researches that job satisfaction was found as a consequence of job characteristics. Michaels and Spector (1982), in testing a turnover model, confirmed that perceived job characteristics was related to job satisfaction. Using card sort, interview and observation to investigate both job incumbents and nonincumbents, Glick et al. (1986) also concluded that job characteristics correlated with general satisfaction. Hackman, Pearce and Wolfe (1978), in a quasi-experiment conducted in a bank, found that job characteristics of clerks correlated both to growth and general satisfaction, thus gave more support to their relationship. In another study, Bhagat and Chassie (1980) reported that motivating potential score correlated both with growth and general satisfaction, but context satisfaction was unaffected. Context satisfaction refers to security satisfaction, pay satisfaction and supervisory satisfaction. However, it should be noted that context satisfaction does not directly relate to the job itself. Using two different measures of job characteristics, Job Characteristics Inventory (Sims, Szilagyi & Keller, 1976) and Dictionary of Occupational Title-complex measure (Cain & Treiman, 1982) to measure job characteristics in 809 young workers of 125 occupations in a longitudinal design, Gerhart (1987) again found Job complexity correlated with job satisfaction. Naughton and Outcalt (1988) used the five core job dimensions to classify jobs

into ten categories. They found different jobs correlated to different degrees of job satisfaction. In a meta-analysis, Loher et al. (1985) analyzed 28 studies specifically related to job satisfaction and found the mean correlation between job characteristics index and job satisfaction was 0.39; and for individual dimensions, mean correlations with job satisfaction ranged from 0.32 (for task identity) to 0.46 (for autonomy). In another meta-analysis, Fried and Ferris (1987) analyzed the correlation of job characteristics to a number of outcomes including job satisfaction also found general support to their correlational relationship.

Job satisfaction in educational settings can be considered to be a present and past-oriented affective state that results when the educator evaluates his work role (Hoy & Miskel, 1987, p.401). It is a result of the on-the-job experiences that relate to the individual's values and needs (Smith, 1967). Thus the causes of job satisfaction for different people are not quite the same. Job satisfaction of teachers was demonstrated to correlate with job characteristics in a study of 93 female Israeli kindergarten teachers (Avi-Itzhak's, 1988). In another study, Poppleton and Riseborough (1988) distributed questionnaires to 686 United Kingdom secondary school teachers and they found that one of the most powerful overall job satisfaction predictor was the challenges experienced in teachers' work.

It is interesting to note that some researches showed that the perceived job characteristics and job satisfaction were in a mutual causal relationship (James & Jones, 1980; James & Tetrick, 1986; Roedel & Nystrom, 1988; Spector & Jex, 1991).

Nevertheless, the correlational relationship between the two still holds.

Job characteristics were also found to correlate with internal work motivation of employees. Hackman, Pearce and Wolfe (1987), in their quasi-experiment on bank clerks, noted that changes in job characteristic and changes in internal work motivation were correlated. Ellis (1988), also using Job Diagnostic Survey as the measuring instrument, found the presence of high scores in core job dimensions would result in great internal work motivation in teachers. Meta-analysis done by Fried and Ferris (1987) also supported the expected linkage between the two said variables.

There were comparatively less researches done to investigate the relationship between job characteristics and intention to quit the job. Michaels and Spector (1982), by path analysis, showed that job characteristics affected job satisfaction and then job satisfaction affected intention to quit the job. In Knoop's (1982) study, job characteristics were found to relate to career alienation in elementary and secondary school teachers. This may be an antecedent of the intention to quit the job in some teachers. A meta-analysis conducted on five experiments found job enrichment was an effective strategy for reducing employee turnover (McEvoy & Cascio, 1985). In a recent study, perceived job characteristic was found negatively correlate with turnover intention (Spector & Jex, 1991).

In sum, the literature supported that perceived job characteristics as a whole are predictors of job satisfaction and there exists a mutual influence between the two. Perceived

richness of job characteristics is also correlated with internal work motivation and intention to quit the job. The correlation to the last outcome is in the negative direction, of course.

In the present study, the writer is mainly interested in the nature of teachers' work while job satisfaction is not our major concern. Therefore, for simplicity, we will only consider job satisfaction as a consequence, not an antecedent, of the perceived job characteristics in the conception of this study.

Moderators

In Hackman and Oldham's original model (1980), only three moderators were presented. They are growth need strength, knowledge and skill, and satisfaction with work context. Many other moderators have been suggested in other researches. These include capacity for growth, job prestige, salary, working conditions (Kulik, Oldham & Hackman, 1987), pay, status (Gerhart, 1987), locus of control, climate, knowledge, work group norms, urban/rural socialization, educational level (Loher et al., 1985), organizational structure, feedback system (Oldham, 1976), economic conditions, marital status and group norms on performance (Fried & Ferris, 1987). In the following paragraphs, only the original three moderators will be described in more details.

Growth need strength

The most popular moderator that attracts many researchers

is the psychological need of the worker, namely growth need strength (GNS). Growth need strength is the employee's desire for the challenge of new learning and the motivation for growth on the job (Graen, Scandura & Graen, 1986; Loher et al., 1985). Moderating effect of growth need strength was supported in many studies such as the two different quasi-experiments done in a manufacturing organization and a bank (Bhagat & Chassie, 1980; Hackman, Pearce & Wolfe, 1978). Fairly strong support was also found in a field study (Orpen, 1979). In Kulik, Oldham and Hackman's (1987) study, employees having good match of growth need strength (high) and motivating potential score (high) of the job were found less likely to quit the job. Ellis (1988) found that teachers with higher needs for growth and achievement would respond more positively to enriched jobs. In three different meta-analyses, similar conclusion was reached that growth need strength is a moderator acting between the job characteristics and behavioral outcomes (Loher et al., 1985; Spector, 1985; Fried & Ferris, 1987).

However, it was commonly noted that the magnitude of the moderating power was inconsistent across groups of high and low growth need strength persons. Generally, it is explained by the presence of differential effect of growth need strength. Persons of higher growth need strength will respond quite positively toward job enrichment in terms of performance. Persons of lower growth need strength also respond positively, but to a much less extent, towards the same enrichment of job (Fried & Ferris, 1987). Explanation has been suggested by Brief and Aldag (1975) that persons of high growth need strength value intrinsic rewards

more while persons of low growth need strength value extrinsic ones more. In this aspect, one may integrate Herzberg's motivation-hygiene theory (Herzberg, 1966) with job characteristics theory. However, not much effort on integrating hygiene factors into job characteristics model was observed. On the other hand, Graen, Scandura and Graen (1986) addressed the inconsistency of the moderating effect of growth need strength between high growth need strength persons and low growth need strength persons in a rather different way. They suggested empirically from a field study that it was the growth opportunity that interacted with growth need strength to induce the predicted growth satisfaction.

Another observation concerning growth need strength is that the definitions used in various studies were inconsistent (Spector, 1985). These studies might refer growth need strength to the top, top two or even top three levels of needs in Maslow's hierarchy of needs (Maslow, 1943). However, some evidence did exist to support generally the moderating effect of higher-order need strength for job satisfaction, motivation and performance, with the evidence for job satisfaction being strongest.

It is criticized that the level of growth need strength of a person might be affected by his perception of job characteristics. Thus growth need strength was said not a constant personal trait. However, in Bhagat and Chassie's (1980) quasi-experiment, change of motivating potential score was not accompanied by a change in growth need strength. In Jackson et al.'s (1981) study, the growth need strength was found stable between two longitudinal measures. The first one was done on 215

16 year-old final year students and the second one was done one year later when they all became full time workers.

Knowledge and skill and context satisfaction

The studies on knowledge and skill are very few, if any. Studies on context satisfaction are few as well (Fried & Ferris, 1987); and the studies on context satisfaction in predicting job satisfaction gave rise to mixed results (Kulik, Oldham & Hackman, 1987). Therefore, more studies on these two moderators stated in the formal model are called for.

Person-environment fit

To predict more accurately the organizational behaviour, a general solution is to take an interactive perspective. Staw and Ross (1985) maintained that stable personal traits were better predictors of job satisfaction. In reaction to this, Gerhart (1987) pointed out the methodological and conceptual problem in their study. Gerhart went on demonstrating that both personal and situational variables would determine the job satisfaction of the workers; and the latter had greater predicting power. Person-job fit in terms of traits and skills was demonstrated to be strongly related to job performance and satisfaction (Caldwell & O'Reilly, 1990). Kulik, Oldham and Hackman (1987), on discussing the concept of person-environment fit (environment refers to the whole context of the organization, not the job alone), identified two kinds of person-environment fit. One is

the fit between person's needs/values and the opportunities for fulfilling such needs/values offered by the environment. The other one is the fit between person's skill and the skill required by the environment. Study on the interaction effect of the job characteristics and the moderators is in fact investigating the points of fitness that help one to predict organizational behaviour.

Caldwell and O'Reilly (1990) further suggested that the measurement of workers' characteristics and organizational situation should be parallel so that easy and suitable comparison could be made. An important and relevant point which is often neglected is that such interaction should be viewed as dynamic. In fact, person and environment mutually affect each other, making the understanding of their interaction more complex. For example, James and Tetrick (1986), after having conducted a confirmatory analytic test on three causal models relating job characteristics to job satisfaction, concluded that job attributes and workgroup structure determined job perceptions while the job perception reciprocally affected one another with job satisfaction. Possible effects of environment on workers' skill and growth need strength, the two moderators, were also suggested (Kulik, Oldham & Hackman, 1987). Furthermore, a comprehensive model of person-organization fit concerning all the above points has been proposed (Chatman, 1989). In this model, it has been suggested to employ Q-sort methodology to compare individual workers' value profiles and organizational value profiles to determine the fit and to predict changes in values, norms, and behaviour. To get the fit, similar constructs of the

individual and the organization should be used. Workers are thought to be able to influence the organization as well in an on-going manner. This challenging model is open to test.

In sum, many moderators have been identified and suggested, with growth need strength being the best documented. Differential effects of high and low growth need strength were consistently found. In the light of the motivation-hygiene theory, the small moderating effect in sample of low growth need strength leads researchers to consider the contextual factors as a complementing moderator, though empirical studies on this are still few.

In the present study, the well documented moderator, growth need strength, will be employed. In addition to this, strength of school ideology, a proxy for measuring school environment, as another moderator will be tested.

Summary

Job characteristics theory is the prominent theory in job diagnosis. However, the theory itself is not concrete to specific jobs because it is theorised to describe all jobs, for the purpose of job redesign. The Job Diagnostic Survey was developed to diagnose the motivating content of jobs in the above premise. Thus it is understandable that many argues were made on the number and nature of the core job dimensions. Question of subjectivity of the measurement is another hot issue. However, it is found that self-report questionnaire can be accepted because its result correlates considerably with other

objective ratings on jobs. Furthermore, it is such perceived job characteristics that are found correlate well with workers' organizational behaviour. A lot of personal and contextual factors have been suggested as the antecedents of perceived job characteristics. Job satisfaction is often chosen as the affective outcome in correlational studies. Substantial studies show that job satisfaction and perceived job characteristics are significantly and positively correlated. Furthermore, some studies show that these two variables actually affect each other. Studies also show that internal motivation is significantly and positively correlated with perceived job characteristics. Intention to quit the job, on the other hand, is correlated significantly with perceived job characteristics in a negative direction. Many moderators have been suggested, but studies on the interaction involving such moderators with job characteristics, except growth need strength, are few. The moderating effect of growth need strength is fairly conclusive. In general, it is found that persons with high growth need strength respond more positively in terms of performance to jobs of high motivating potential than those people with low growth need strength. In both groups, the correlations between growth need strength and performance are found positive. However, contextual factors are suggested to be added to explain the significantly lower moderating effect in the low growth need strength samples.

C. CHALLENGES FROM OTHER APPROACHES

Apart from the job characteristics approach, there are other approaches that are related to job design challenging the predicting power of job characteristics on workers' behavioral outcomes. Challenges from the dispositional approach and social information processing approach will be discussed in this section.

THE DISPOSITIONAL APPROACH

The dispositional approach represents the trend of research that lays stress on the dispositional effect of employee in influencing employee's reactions. The dispositional theorists believe that in predicting behavioral outcomes of employees, employees' own consistent traits are more crucial than job characteristics. A large scale longitudinal survey lasting for five years concerning the dispositional effect was conducted by Staw and Ross (1985). A national random sample of over 5000 middle aged (aged 45 - 59) men were investigated. Attitudes of workers were found significantly stable both over time and across situations that were operationalized as changing employers and/or occupations. It was also found that prior attitudes were a strong predictor of subsequent job satisfaction. In another longitudinal study (Staw, Bell and Clausen, 1986), measures of affective disposition from as early as adolescence were used to predict job attitudes in later life. The results showed that dispositional measures significantly predicted job attitudes over a time span of nearly 50 years. Workers' traits are thus stated

to be more powerful in predicting workers' behaviour than job characteristics.

Some studies were conducted to respond to Staw and Ross' (1985) challenges. Gerhart (1987) carried out a similar longitudinal research. A number of methodological and conceptual problems of the former research were pointed out by Gerhart. First, the former study did not specify and define what traits were referred to. Consequently, the unspecified traits were not measured suitably by breaking down the concepts into measurable dimensions. Furthermore, the sample of the study, men aged 45 to 59, were too old. These people were probably more resistant to change in job complexity. Finally, the estimated relationship between situational factors and job satisfaction was not corrected for measurement error. Therefore, the corresponding conclusion that trait is a more important determinant of job attitude may not be so confirmed. On the other hand, Gerhart found that job complexity was an important predictor of job satisfaction. In a laboratory study done later on (Levin & Strokes, 1989) to study the relative effects of negative affectivity and task design on reported job satisfaction, it was concluded that job design, through affecting job characteristics, was much more influential on determining workers' behaviour. In other words, the job characteristics approach was supported.

THE SOCIAL INFORMATION PROCESSING APPROACH

The social information processing approach is another approach of job design, which lays greater stress on the social

context of the work settings in determining workers' reactions. The reactions are thus not viewed as fundamentally influenced by the job characteristics themselves. Salancik and Jeffery (1978) argued that individual attitude was a product of how people socially constructed the world around them; the objective nature of job characteristics thus was not of unique importance. White and Mitchell (1979) opined that both the cues given by co-workers and the physical properties of the work had effects on employees' perceptions of job enrichment. Since people actively seek to interpret and make sense of their work settings and experiences, jobs should be viewed embedded in a context largely defined by organization and social factors that are linked through individual perceptions to responses (Kozlowski & Hults, 1986). The social information processing approach, unlike the dispositional approach, does not reject the importance of the job nature itself, but concerns much more on the larger social context of the work settings.

D. INTEGRATED APPROACH - A COMPROMISE

In fact, some researchers have tried to integrate the job characteristics approach with the social information processing approach. On review of three studies, Caldwell and O'Reilly (1982) found perceptual measures of job dimensions might reflect both a social and an objective reality. Griffin (1983), in a field study, discovered that increase in job satisfaction was a result of both job enlargement and social labelling. In another

study, 631 respondents of 4 organizations were interviewed, asked to sort cards and observed. Some of them were job incumbents while the others were not. The results also supported both approaches (Glick, Jenkins & Gupta, 1986). Fried and Ferris (1987), in their thorough review and meta-analysis on a number of relevant researches, again suggested that the two theories could be integrated. Roberts and Glick (1981) argued that social cues partly determined the task perceptions, and they called for examining tasks in their environment. It should be noted that even the proposers of the job characteristics theory asked their theory to be applied in a person-environment fit context (Kulik, Oldham & Hackman, 1987). Furthermore, the interaction between person and environment were asked not to be viewed as a static one. More complicated on-going mutual effect would be worth studying in future (Kulik, Oldham & Hackman, 1987; Chatman, 1989).

In short, the dispositional approach recently challenges the job characteristics approach by stressing again the importance of consistent personal traits in affecting workers' behaviour. In the opposite direction, the social information processing approach stresses that it is the social context of the work settings that determines the workers' reactions predominately. The theorists of the job characteristics approach now start to pay greater attention to a more complex, ongoing, mutually affected person-environmental or integrated situation.

E. IMPLICATIONS FOR THIS STUDY

In general, schools have many policies and regulations to define teachers' actions. However, from the literature reviewed in the previous sections, it is seen that definition of teachers' work is subject to change from time to time, from place to place, and from person to person. The present form of the job characteristics theory considers both the job characteristics and the active role played by the workers in perceiving the nature of work. The theory is of particular relevance to complex work and mature workers. (This will be made clear in the later section.) Teachers' work is quite complex and teachers are expected to be mature workers; therefore, the job characteristics theory is an appropriate theoretical base for the study of the nature of teachers' work. As mentioned in section D, the dispositional approach argued that personal traits were more important in determining the work attitudes of the employees. In this study, some personal attributes are considered to be the antecedents of the perceived job characteristics. Furthermore, a broader work setting context, school ideology in terms of its strength, is included as an antecedent affecting teachers' job perception in this study as a response to the social information processing theory. Growth need strength, a personal trait, and strength of school ideology, an environmental factor, were grouped into the category of moderators that moderate the correlational relationships between job characteristics and teachers' behavioral outcomes. This is a trial to respond to the concept of the person-environment fit model.

PERCEIVED JOB CHARACTERISTICS

In the early work of Hackman and Lawler (1971), it was pointed out that tasks and jobs were invariably redefined by the individuals who performed them, sometimes deliberately and sometimes without full awareness. Ashford and Cummings (1983) maintained that we needed to focus on the individual as a proactive seeker, monitor and interpreter - and even generator - of cues that constituted the information environment. It is therefore the perceived job characteristics, not the objective ones, that are chosen as the central concern of this study. As mentioned in chapter two, teachers' work is vague both in boundaries and depth. Thus unlike other jobs, definition of work made by teachers themselves might be thought to be having considerable objectivity.

From the pilot test, it has been found that teachers' work can be delineated into six work categories. With these six categories and the five dimensions of job characteristics, a thirty celled matrix describing teachers' work both in feeling and content can thus be generated. The study on this matrix should reveal plenty of useful knowledge.

Feedback, one of the five core job dimensions, will be conceptualized somewhat differently in this study as it is a rather problematic dimension in the job characteristics model as mentioned in the literature review. In this study, the amount of feedback from all sources, not just the amount of total feedback from the job itself, will be counted.

ANTECEDENTS

Various personal and contextual factors have been suggested as antecedents of job perception. In this study, age, sex, post, and tenure (both in profession and in the present school), qualification, professional training, marital status, religion and teaching level, are chosen as the personal factors. Strength of school organizational ideology measured by Index of Organizational Ideology is chosen as an overall summary index of the contextual/ organizational factor. Importance of adding organizational factors in studying task design has long been urged. Pierce, Dunham & Blackburn (1979) maintained that study of task design had to be framed within complex nomological networks which included relevant individual, technological, and organizational factors. Kozlowski and Hults (1986) also advocated the necessity of expanding job scope models to include the important contextual characteristics that defined job and related perceptions. In short, the objective content of job is important, but different personal and environmental factors may induce different perceptions in different people.

Organizational ideology

In this study, organizational ideology of school is used to describe the relevant environment or atmosphere in which teachers work. In organizational culture research, organization tends to be seen as something of which boundaries surround a type of cultural entity. Individuals of one organization can be

characterized by cultural similarity in terms of shared understandings, beliefs, values, norms, symbols, etc., and, consequently, to differ to some extent from individuals and groups outside the organization. Alvesson (1987) suggested that, to understand the broad aspect of an organization, it might be beneficial to concentrate on aspects which catch something essential in the "organizational culture". He recommended to investigate "organizational ideology". Though there are many different definitions, the common core aspect of organizational ideology concerns its character as a set of beliefs about the social world and how it operates, and what values and ideals are worth striving for in the organization. Thus organizational ideology might be conceived as a key to , and focus of, interpretations of organizational conditions. Culture then can be regarded as a sort of general background for ideologies.

Although organizational ideology is by definition an organizational factor, in the present study, it is tied to individual teachers who are the units of analysis concerned. It can be accepted because what we can get is the data of perceived strength of organizational ideology from teachers. Perception is of course individualistic. It is probably the perception of organizational ideology that affects teachers on their perception of their job.

An index of organizational ideology has been developed by Cheng (1990) based on Price and Mueller (1986) in a pilot study and was used to describe the strength of organizational culture in a study on organizational commitment (Cheng, 1990). In the present study, the same instrument was used.

MODERATORS

In this study, contextual factor in terms of school organizational ideology is considered both to be an antecedent of job perception and a moderator affecting attitudes. In the cornerstone study of job characteristics (Turner and Lawrence, 1965), cultural background was suggested to be an important potential moderator moderating the relationship between job characteristics and the proposed personal and work outcomes. Oldham (1976) similarly suggested that organizational climate (the more superficial, observable level of organizational culture) might be a moderator. In Oldham, Hackman and Pearce's (1976) study, work context satisfaction was found to be a significant moderator. Dunham (1977) gave partial support empirically on the moderating effect of organizational climate. In Loher et al.'s (1985) meta-analysis study, it was concluded that situational variables such as organizational climate should be included to explain the equivocal findings of the studies. In the educational field, it was found that perception of school climate was correlated with level of job satisfaction among teachers (Chittom & Sistrunk, 1990). Furthermore, Ellis and Bernhardt (1988) discovered that perceived supervisory climate and growth need strength of teachers were correlated.

It is clear from the above review that to study contextual factors both as an antecedent and a moderator relating to perceptions of job characteristics is meaningful. It is noted that empirical studies on environmental effect in job characteristics model, though advocated by many researchers

(usually at the end of their published papers), the number of which is very small. Therefore, it is quite necessary to fill such research gap.

Another moderator included in the present study is the growth need strength. Its effect is well documented. Much of the discussion concerning growth need strength can be found in section B of this chapter.

BEHAVIORAL OUTCOMES

Three attitudinal and behavioral outcomes, namely general job satisfaction, internal work motivation and intention to quit the job, were included as the predicted consequences of job perception. Intention to quit the job is conceptualized in greater detail in the present study. A teacher may intend to change the school at which he works, or he may intend to enter another occupation. Therefore, intention to quit the job in this study will be analyzed in terms of intention to change the school (i.e. will work in another school) and intention to change the job or the profession (i.e. will not be a teacher any more). Deeper understanding of these relationships may be beneficial to personnel management in school.

RESEARCH QUESTIONS

From the conception, three research questions are proposed for study:

1. How do teachers perceive their job in terms of work categories, concern, time allocation, and motivating potentials?
2. How are teachers' personal attributes and school's organizational ideology related to teachers' perception of job characteristics?
3. How are perceived job characteristics related to teachers' affective outcomes in terms of job satisfaction, internal motivation and intention to quit their job?

It is seen that teachers' work can be described in terms of five job dimensions of job characteristics and six work categories. These together form a matrix of thirty cells. Analysis of the study will be based on this matrix.

In the first research question, the interest is to find out the overall nature of teachers' work according to the combinations of work categories reported and the proportion of teachers doing each work category. Apart from teaching which is a fundamental task, administration may be a rather interesting category to explore, especially when the government recently calls for greater participation of teachers in school management (Education and Manpower Branch and Education Department, 1991). It is also interesting to find out which work category is most challenging in terms of motivating potential, and which is least

challenging. Furthermore, the work categories that receive greatest and least concern respectively can be identified. The categories that consume greatest and least amount of the teachers' time will be found out too.

In the second research question, it is interesting to know the difference in work perception on each work category among teachers of different personal attributes. For example, is it true that more experienced teachers perceive 'teaching' less challenging than the novices? Difference in work perception on teachers' whole job among teachers of different personal attributes is also worth studying. Furthermore, it is interesting to test whether greater strength of school organizational ideology relates to stronger perception of challenging work.

In the third research question, correlational relationships between each work category and general job satisfaction, internal work motivation, and intention to quit the job respectively will be investigated. Correlational relationships between teachers' whole job and general job satisfaction, internal work motivation, and intention to quit the job respectively will be found as well. Moderating effects of growth need strength and school organizational ideology on the relationships of perceived job characteristics and the affective outcomes will be analyzed too.

The answers to these research questions may contribute to the ways that enhance school effectiveness. In the context of job itself, the framework of this study suggests three possible levels for achieving the aim: the individual teacher, the nature of the job, and the school. First, knowing the fundamental

antecedents is a starting point to understand the unchangeable and changeable factors behind teachers' perception of their work. Secondly, the nature of teachers' job can be designed or redesigned with respect to work categories and/or job dimensions. Thirdly, the school administrators can manipulate the strength of the school organizational ideology through various means so as to create an atmosphere in which teachers will perceive their job having higher motivating potential.

CHAPTER 3. METHODOLOGY

In this chapter, some important terms used in this study will be defined. The nature of the study, together with the unit of analysis, the variables and the measurements employed will be stated. The result and discussion of a pilot study conducted in advance of the formal study will then be presented briefly. The sampling design, sampling procedures and the analysis design of the formal study will be described at last.

A. DEFINITIONS OF IMPORTANT TERMS USED IN THE STUDY

Perceived job characteristics:

The cognitive representations of job attributes that reflect the psychological meaning and significance of these attributes to individuals (James and Tetrick, 1986). (It is described in terms of the five core job dimensions defined below.)

Skill variety:

The degree to which a job requires a variety of different activities in carrying out the work, involving the use of a number of different skills and talents of the person. (Hackman & Oldham, 1980)

Task identity:

The degree to which the job requires completion of a whole, identifiable piece of work -- that is, doing a job from beginning to end with a visible outcome. (Hackman & Oldham, 1980)

Task significance:

The degree to which the job has a substantial impact on the lives of other people, whether these people are in the immediate organization or in the world at large. (Hackman & Oldham, 1980)

Autonomy:

The degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out. (Hackman & Oldham, 1980)

Job feedback:

The degree to which carrying out the work activities required by the job provides the individual with direct and clear information about the effectiveness of his or her performance. (Hackman & Oldham, 1980) (In this study, feedback is modified to include feedback from principals, colleagues and students as well.)

Motivating potential score:

The single index that combines the five job dimensions/characteristics that reflects the overall potential of the job environment to foster motivation and satisfaction on the part of job holders. (Hackman & Oldham, 1980)

Growth need strength:

The extent to which the employee desires for the challenge of new learning, and motivates for growth on the job (Graen, Scandura & Graen, 1986).

School organizational ideology:

A set of shared beliefs, values and ideals about the social world and how it operates in the school (adapted from Alvesson, 1987).

Index of Organizational Ideology:

The extent to which the workers of an organization have a set of shared beliefs, values and ideals about the social world and how it operates in the organization (Alvesson, 1987).

General job satisfaction:

The extent to which the employee feels satisfied as a results of evaluating his/her work role (Hoy & Miskel, 1987, p.401).

Internal work motivation:

The extent to which the employee is internally energized, activated, moved, and directed to channel his behaviour toward goals. (Berelson & Steiner, 1964, p.240)

Teacher work category:

The classification of teachers' actual work in terms of teaching, extracurricular activities, guidance, discipline, administration and miscellaneous affairs. (Findings are obtained from the pilot study.)

TABLE 1

Variables

Part of the study	
Phase	
Phase 1	
Phase 2	
Phase 3	
Phase 4	
Phase 5	
Phase 6	
Phase 7	
Phase 8	
Phase 9	
Phase 10	
Phase 11	
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Phase 95	
Phase 96	
Phase 97	
Phase 98	
Phase 99	
Phase 100	

B. NATURE OF THE STUDY

The present study is a cross-sectional sample survey by questionnaires. It is a descriptive as well as an exploratory research. This kind of study is suitable for detecting correlational relationship of various variables. Individual aided secondary school teacher will be the unit of analysis in this study.

C. VARIABLES AND MEASUREMENTS

The variables to be studied are summarized in Table 1.

TABLE 1
Variables Used in this Study

Part of The Study	Independent Variables	Dependent Variables
First	Sex, Age, Qualification, Professional training, Tenure in profession, Tenure in present school, Marital status, religion, Post, Teaching level, School ideology strength	5 core Job Dimensions for each of the 6 Work Categories
Second	5 Job Dimensions for each of the 6 Work Categories, Growth Need Strength, School Ideology Strength	Job Satisfaction, Motivation, Intention to Change the School Intention to Change the Job

PERSONAL ATTRIBUTES AND SCHOOL IDEOLOGY STRENGTH

Personal attributes were recorded in different categories in statistical analysis. For age, three categories were used. These are ages up to 30, ages from 31 to 40 and ages above 40. For post of teachers, the following were coded: teacher without administration duty, teacher with administration duty, panel head, special master and vice principal. Special masters include discipline, guidance, extracurricular activity, career, general affairs and academic affairs masters. For tenures in either profession or school, 3 groups are categorized: 1-5 years, 6-10 years and over 10 years. For qualification, it refers to college of education (post secondary), non-degree tertiary institute, first degree, master degree and doctor degree. For professional training, it refers to certificate of education (either post secondary or post graduate), bachelor of education and master of education. Teaching level refers to teaching mainly lower forms (F.1-3) and teaching mainly upper forms (F.4-7). School organizational climate in terms of index of organizational ideology was measured by an instrument adapted and developed by Cheng (1990). A sample item is listed below. The answer of each item can be chosen from very untrue (1) to very true (7) in a seven point Likert scale. In Cheng's study, the reliability coefficient (alpha) of the scale was found to be .80.

The members of your school are very much concerned with the tradition and ethos of the school.

CORE JOB DIMENSIONS

BEHAVIORAL OUTCOMES

The five job dimensions indicating job characteristics were measured by a questionnaire developed in this study. The instrument was adapted from Job Diagnostic Survey (Hackman & Oldham, 1980). The instrument was modified to suit the specific situation of teaching job in the present study. This is necessary as suggested by Charters et al. (1984) that school teaching is a job very different from those originally considered in the model. For the dimension 'feedback', measurement including various sources of feedback was recorded.

The following is a set of sample items of the five core job dimensions. The answer of each item can be chosen from very untrue (1) to not sure (4) to very true (7) in a seven point Likert scale. In the original scales, the reliability coefficients (alpha) range from .59 to .71.

Skill variety scale: How much variety is there in your job?

Task identity scale: To what extent does your job involve doing a "whole" and identifiable piece of work?

Task significance scale: In general, how significant or important is your job?

Autonomy scale: How much autonomy is there in your job?

Feedback scale: To what extent do the principal or colleagues let you know you are doing a good job?

BEHAVIORAL OUTCOMES

To measure job satisfaction and motivation, a questionnaire adapted from the original Job Diagnostic Survey was used. One single and direct Likert type item of seven response levels each was used to measure intention to change the school and intention to change the job respectively.

One sample item each for measuring job satisfaction and motivation respectively are listed below. The answer can be chosen from disagree strongly (1) to neutral (4) to agree strongly (7) in a seven point Likert scale. The reliability coefficients (alpha) of the two original scales are both .76.

General job satisfaction:	I am satisfied with this job generally.
Internal work motivation:	My opinion of myself goes up when I do this job well.

GROWTH NEED STRENGTH

For the moderator 'growth need strength', the growth need strength "would like" subscale of the original Job Diagnostic Survey was adapted. The reliability coefficient (alpha) of the original scale is .88.

TABLE 1
The following is a sample item for measuring growth need strength. The answer can be chosen from no expectation (1) to extreme expectation (6) in a six point Likert scale.

Would like having a stimulating and challenging work.

Some other parts of the questionnaire asked the subjects to give direct answers to individual singled questions. Reliability coefficients of these parts cannot be calculated. All parts of the questionnaire can be found in appendix B.

A summary of the characteristics for the original instruments is presented in Table 2. The results of reliability tests of the scales of the present study are presented in Table 3.

TABLE 2

Summary of the Characteristics of the Original Instruments

Instrument	Source	No. of Items	Potential Score	Estimated Reliability (Cronbach's alpha)	Validity
Org. Ideology (IOI) (adapted)	Cheng (1990)	10	10-50	0.80	Tested
Job Diagnostic Survey Scale (JDS)	Hackman & Oldham (1980)				
-Skill Variety		3	1-7	0.71	Tested
-Task Identity		3	1-7	0.59	Tested
-Task Significance		3	1-7	0.66	Tested
-Autonomy		3	1-7	0.66	Tested
-Feedback From Job*		3	1-7	0.71	Tested
-Feedback From Agents*		3	1-7	0.78	Tested
-Growth Need Strength		3	1-7	0.88	Tested
-General Job Satisfaction		3	1-7	0.76	Tested
-Internal Work Motivation		3	1-7	0.76	Tested

The values for the JDS scales were computed by obtaining the median interitem correlation for all items which are scored on each scale, and then adjusting the median by Spearman-Brown procedures to obtain an estimate of the reliability of the summary scale score.

Tested = tested and validated in previous studies.

* These two scales are combined in the present study to form a general feedback scale of 2 items.

TABLE 3
Internal Consistency Reliability of the Scales Used in this Study

Scale	Teaching	Extracur Activity	Guidance	Discipline	Adminis- tration	Miscell Affairs
Task Identity	.5346	.7655	.7655	.7904	.8654	.8541
Autonomy	.8326	.8613	.8174	.8076	.8446	.7886
Feedback	.8258	.8029	.7389	.7418	.8064	.7886
Skill Variety	.8307	.7888	.7855	.7629	.7728	.7917
Task Significance	.7753	.7602	.7837	.7894	.8277	.8131
Job Satisfaction	.5968	.6326	.6142	.5729	.6627	.6670
Motivation	.4871	.5481	.5878	.6509	.6977	.6444
Growth Need Strength		.8885				
School Ideology Strength		.8652				

For task identity down to motivation, figures on each row actually represent reliability coefficients of six scales of the printed term with respect to six work categories.

In Table 3, it is shown that the reliability coefficients (Cronbach's alpha) across the scales are quite high. Although some scales, particularly those concerning with motivation, have reliability coefficients ranged only from about .5 to .7, such a reliability range can still be accepted as all scales except the growth need strength and school ideology strength consist of only two items.

D. PILOT STUDY

A pilot study was conducted to conceptualize clearer the study and to test the instrument used. Classification of teachers' work must be done beforehand because there are no previous classification study of this kind in Hong Kong. Furthermore, the main instrument, Job Diagnostic Survey, was in English originally, the accuracy of the Chinese version must be checked. Time required to finish the questionnaire was noted as well. Finally, overall suggestions and comments on the questionnaire were gathered. The pilot test was conducted in two phases. In the first phase, teachers' job was categorised into several groups. In the second phase, the complete questionnaire was administered to see if there were some misleading parts and any other items that needed to be reset. Statistical analysis was administered to test the instruments.

THE FIRST PHASE

In the first phase, short open-ended questionnaires aiming at delineating teachers' work into a number of categories were distributed to a sample of 56 secondary school teachers of a school. 45 questionnaires were collected. The return rate was 84%. It was found that teachers' work could be categorized into 6 categories, namely teaching, extracurricular activities, guidance, discipline, administration and miscellaneous duty. It was also found that for each category, the opinions on which particular pieces of work included were quite similar. Therefore

the above classification of teachers' work was adopted and used in the second phase of the pilot test.

THE SECOND PHASE

In the second phase, considerably long questionnaires were distributed to each of the 56 teachers mentioned before. Some of the aims of this study were to answer the following questions. Is it true that all teachers need to do all the six categories of teachers' work mentioned previously? How do teachers allocate time to deal with these duties? Is it true that different teachers concern differently among the six categories of teachers' work? If all the answers were 'yes', then it is clear that teachers perceive differently on their work. This time the return rate was 50%. Out of the 28 returned questionnaires, one was ignored due to incomplete data it contained.

In the pilot study, it was found that teachers' work could appropriately be delineated into six categories, namely teaching, extracurricular activities, guidance, discipline, administration and miscellaneous affairs. Teachers ranked differently their concern on these work categories. Furthermore, teachers distributed different amount of time to deal with each work category. In this study, although the time spent in actual classroom teaching was not included, teaching still received the greatest concern and consumed the greatest amount of working time. Miscellaneous affairs, on the other hand, received least concern, but it did not consume the least amount of working time.

The motivating potential scores among the six teacher work

categories were not the same. Teaching had the greatest motivating potential while miscellaneous affairs had the least. It was found that correlations among the motivating potential score of the six work categories were not strong enough. It is concluded that for studying the nature of teachers' work in terms of perceived job characteristics using five dimensions, it is better to analyze teachers' work in terms of various work categories instead of analyzing the job in a whole sense.

It was found that teachers' job satisfaction could better be measured in an overall manner. It is because the scores of job satisfaction found among the six work categories were highly correlated. Motivation could also be measured in an overall manner due to similar reason. Using individual and overall motivating potential scores as predictors in turn to regress on the overall job satisfaction and the overall motivation respectively, it was found that in both cases, the motivating potential scores were fairly strong predictors. However, the relationships between motivating potential score and intention to change the school or intention to change the job were not clear.

For the antecedents studied, only a few significant differences were identified. More study was thus called for.

One point must be stressed is that the sample size in the pilot test was rather small and all the subjects belonged to the same school. This certainly leads to sampling bias. Furthermore, four part time teachers in the target sample should be excluded in the study but the author failed to recognize this beforehand, thus greater bias in perception of teachers' work may

be resulted. Generalization of the result certainly is not appropriate except for giving hints to the design of the formal research and for clarifying the research questions. Tables A-1 to A-8 which demonstrated some data analysis of the pilot test can be found in Appendix A.

E. SAMPLING DESIGN AND PROCEDURES

This is a cross-sectional sample survey. The data were borrowed from the database of Cheng's (1992) study on the induction and implementation of the School Management Initiative (Education and Manpower Branch and Education Department, 1991). In his study, 316 aided and caput secondary schools of Hong Kong were surveyed. Supervisors, principals, teacher representatives and all teachers of the surveyed schools were invited to complete different questionnaires involving personal, school and school management body data. Questionnaires were distributed in late February and were collected in early March. 241 schools had the questionnaires mailed back, which corresponds to a 76.3 % return rate. 127 supervisor, 204 principal and 6300 teacher questionnaires were collected. The present study extracted part of the data (1133 aided secondary school teachers, about one-sixth of the total sample) to conduct statistical analyses. The ultimate generalization is more meaningful by choosing this sample because the majority of Hong Kong secondary schools are aided type. The sample of schools is relatively homogenous in terms of salary structure, professional qualification of teachers

and administrators, promotion structure, teacher-class ratios, school facilities, formal curricula to be completed, public examination system, supporting personnel, formal opportunities of professional training and development, and supervision by the Hong Kong Education Department (Cheng, 1990).

F. DESIGN OF ANALYSIS

In this study, the unit of analysis is the individual teacher. For each teacher, the data collected were aggregated for items measuring dimensions of variables, one score for index of school organizational ideology, five scores for the five core job dimensions for each work category, one motivating potential score (calculated in the traditional multiplicative means (Hackman & Oldham, 1980) as a composite representation for the overall job characteristics for each work category), one score for job satisfaction, one score for motivation, one score for intention to change the school, one score for intention to change the job and one score for growth need strength.

Analytical procedures were as follows:

1. Descriptive statistics were conducted to show the characteristics of the sample.
2. Coefficients of internal consistency reliability of the scales used were calculated and checked.
3. Descriptive statistics on percentage of teachers involving in different work categories, percentage of teachers participating different number of work

categories, time spent by teachers on each work category and degree of concern of teachers on each work category were calculated.

4. Mean scores and standard deviations of motivating potential scores of all job dimensions of each work category and the overall teachers' job were found.
5. Profiles of job characteristics of each work category and that of the overall teachers' job were plotted.
6. ANOVA of the overall motivating potential score with respect to the possible antecedents including various personal attributes and the index of school ideology were conducted.
7. Profiles of job characteristics of teachers of different personal attributes and teachers perceiving different school ideology strength were plotted.
8. Pearson correlations were found for the relationships between job characteristics and teachers' behavioral outcomes for all teachers and for groups of high growth need strength, low growth need strength, high school ideology strength and low school ideology strength teachers respectively.
9. Stepwise multiple regression was conducted to find the contribution of various antecedents to motivating potential score. Similar procedure was conducted to find the contribution of job characteristics in terms of motivating potential of individual work categories and job dimensions respectively to the behavioral outcomes.

CHAPTER 4. RESULTS AND DISCUSSION

At the beginning of this chapter, the characteristics of the sample will be outlined. Result of the reliability tests of the scales used in the questionnaire will be presented. Teachers' work will then be analyzed according to the three research questions set.

A. THE SAMPLE

Table 4 shows the characteristics of the sample of this study. It is seen that the subjects were diverse in terms of the characteristics listed. About half of the subjects were male and about half were female. For age, about 45 % of the subjects were of age 21 to 30 and about 38 % of the subjects were of age 31 to 40, indicating that the sample was relatively young. About half of the subjects were bachelor degree holders and about one-fourth of the subjects were post-secondary certificate of education holders. The ratio between these two subsamples reflected the actual ratio of certificate masters and graduate masters in a standard aided secondary school. For professional training, about three-fourth of the subjects hold either post-secondary or post-graduate certificate of education. The certificate masters got their certificates from post-secondary colleges of education while the graduate masters got their certificate, if any, from the schools of education of the two universities. Thus most of the subjects have received proper teacher training. For post, a bit more than half of the subjects were just ordinary teachers.

These teachers did not hold any administration duty. About one-fourth of the subjects were panel heads and about 12 % of the subjects were special masters. The latter include the discipline masters, the career masters, the guidance masters, the extracurricular activities masters, the academic affairs masters and the general affairs masters. Only about 3 % of the sample were vice principals who occupied the highest rank among teachers. For tenure in profession, about 60 % of the subjects had 10 years or less teaching experience and about 40 % of the subjects had teaching experience of more than 10 years. Tenure in school refers to the number of year a teacher had been working in his/her present school. More than half of the subjects had tenure of 5 years or less, about 20 % of the subjects had tenure of 6 to 10 years and about one-fourth of the subjects had tenure of more than 10 years. If the figures of the tenure in school is compared with that of the tenure in profession, it is found that the percentage of subjects was larger in the former in the tenure category 1 to 5 years while the reverse was true in the other two tenure categories. This implies that some subjects should have worked in more than one school. Job perception of some subjects thus might have also come from the experience of their past schools. For marital status, about half of the subjects were single and about half of the subjects were married. For religion, about half of the subjects had religious beliefs and about half had not. For those subjects having religious beliefs, most of them were either Catholics or Christians. For teaching level, the proportion of the subjects teaching upper and lower forms was about one to one.

TABLE 4 FINDINGS RELATED TO RESEARCH QUESTION 1

Characteristics of the Sample

Sex	Male (49.2)	Female (50.8)
Age	21-30 (45.5)	31-40 (37.9) >40 (16.9)
Qualification	College of Education (24.8)	Non-degree tertiary institute (10.9)
	Bachelor (56.2)	Master (5.0)
	Doctor (0.2)	Others (2.9)
Professional Training	Cert. of education (75.8)	Bachelor of education (8.2)
	Master of education (2.0)	Others (14.0)
Post	Teacher without administration duty (53.9)	
	Teacher with administration duty (6.8)	
	Panel head (24.7)	
	Special master (11.7)	
	Vice principal (2.9)	
Tenure in Profession	1-5 years (36.1)	6-10 years (24.4) >10 years (39.5)
Tenure in School	1-5 years (54.0)	6-10 years (19.8) >10 years (26.2)
Marital Status	Single (44.6)	Married (53.9) Other (1.4)
Religion	No (53.3)	Christianity (33.2) Taoism (0.2)
	Buddhism (1.5)	Catholicism (11.4) Others (0.4)
Teaching Level	F.1-3 (44.1)	F.4-7 (55.9)

Percentages of the groups are printed inside parentheses.

B. FINDINGS RELATED TO RESEARCH QUESTION 1

Table 5 shows that teaching was a job that all teachers could

The first research question is 'how do teachers perceive their job in terms of work categories, time spent, concern, and motivating potentials?' To understand the nature of teachers' work, the analysis involved relatively objective description and subjective perception of teachers' work.

Table 5 shows that teaching was a job that all teachers could

NATURE OF TEACHERS' JOB IN TERMS OF WORK CATEGORIES

is informative in that it shows that teachers' work is not only

At the beginning, the scope of teachers' work is observed. In Table 5, percentage of teachers who need to perform various work categories is shown.

Teachers in the study were asked to indicate the percentage of their work time spent on each of the following categories:

Table 5 shows that teaching was a job that all teachers could

TABLE 5

Percentage of Teachers Involved in Various Work Categories

Work Category	% of Teacher Involved
Teaching	100.0
Extracurricular Activity	86.8
Guidance	56.4
Discipline	49.2
Administration	52.4
Miscellaneous Affairs	62.7

Table 5 shows that teaching was a job that all teachers could

More than half of the teachers needed to perform each of the

categories of work. About one-fourth of teachers need to be free of from his work. However, different portions of teachers were required to do the other five categories of work. It seems that extracurricular activity is the second most popular category. The work that least number of teachers did is 'discipline'. In fact this aspect of job probably may not be welcomed by some teachers for an unfriendly image of teachers doing disciplinary work is often perceived by some students. It is interesting to note that about 60% teachers needed to do miscellaneous affairs which is the least professional category. In a standard secondary school, roughly speaking, about three-fifth (i.e. 60%) of the teaching staff need to act as form teachers. Is it true that one of the function a form teacher needs to perform is to handle miscellaneous work? Would teachers like to do this kind of work? Further exploration on these questions may be useful for a deeper understanding of teachers' work attitude. The conclusion made here is that all the six work categories were not uncommon to teachers. From this, it can be deduced that different teachers need to perform different combinations of work categories. This is made clear in the next section.

COMBINATIONS OF WORK CATEGORIES

In Table 6, it is seen that only very few teachers (3.5%) could do only one category of work which must be 'teaching'. More than half of the teachers needed to perform four or more

categories of work. About one-fourth of teachers need to do all six work categories. Thus teachers needed to do a wide range of work generally. This may lead to good or bad consequences. Teachers may be more positive in attitude according to job characteristics theory as work will be more challenging if more skills are required. On the opposite direction, teachers cannot concentrate on his teaching work which is of his first priority of concern. The degree of concern with various work categories will be discussed with evidence later. This second consequence may be more likely if teachers are overloaded.

TABLE 6

Percentage of Teachers Doing Combinations of Various Number of Work Category

No. of Work Category	% Teacher Involved	Cumulative %
1 only	3.5	3.5
2 only	13.6	17.1
3 only	20.9	38.0
4 only	19.6	57.6
5 only	18.8	76.4
all 6	23.7	100.0

teaching (non-classroom teaching in the table), which include
 mark: TIME SPENT ON VARIOUS WORK CATEGORIES
 preparing lessons, it is noted that the standard deviation

For teachers doing the same content of work, different
 amount of time may be allotted to each work category. Table 7
 illustrates this.

TABLE 7

No. of Hours per Week Teachers Spent On Various Work Categories

Work Category	No. of Hours Spent per Week		
	Mean	Standard Deviation	Range
Classroom Teaching	18.30	3.27	1-23
Non-classroom Teaching	13.04	11.10	1-60
Extracurricular Activity	3.14	3.24	1-21
Guidance	2.73	2.69	1-20
Discipline	2.96	3.03	1-25
Administration	4.20	4.61	1-30
Miscellaneous Affairs	2.44	2.27	1-20

It is not surprising to see that the most time demanding
 work is teaching, no matter referring to the amount of time spent
 on classroom teaching and that on those work closely related to

teaching (non-classroom teaching in the table), which include marking homework, setting and marking examination papers and preparing lessons. It is noted that the standard deviation relative to the mean in classroom teaching is the smallest. It is obvious as the amount of time required is constrained by formal time table and constant class-teacher ratio in aided schools. However, when looking at the range, it seems that in some schools, certain teachers (probably those of very high rank) were nearly free of teaching responsibility. The writer is very doubtful about this. In the 'teaching related' category, the range and the standard deviation were much greater. This may be related to teachers' teaching experience and knowledge about the subject matter. Although miscellaneous affairs required the least amount of time for teachers, it was not small indeed when comparing with that of guidance and discipline. It should be noted that for extracurricular activity, discipline and administration, the standard deviations were greater than the corresponding means. It shows that the deviations of time spent on these work categories were very great among teachers. Different schools may probably adopt different administrative structures, which may generate different standards, working patterns and norms, thus requiring different amount of time to finish them. In terms of time spent on various work categories, teachers' work is quite diverse. No matter what the actual cause of the diversity is, it indicates that teachers' work can hardly be defined in a single and concrete way that is universally true and accepted. It is suspected that even if teachers do the same type of work with the same amount of time, their perception on

the work will still differ if they have different concerns on the work categories. This will be discussed in the next section.

DEGREE OF CONCERN IN VARIOUS WORK CATEGORIES

Table 8 indicates the degree of concern of teachers in various work categories. Teaching received the greatest amount of concern (6.64) which is actually near the possible maximum. It is quite predictable that the very central traditional role of teacher is to teach subject matter. In recent years, more and more concern on guidance arises in the education field. The Education Commission Report No.4 (Hong Kong government, 1990) highlighted various aspects of guidance in schools. In this study, guidance is found to be a second attention concentrated work category. Extracurricular activity got the third place in concern. For miscellaneous affairs, the degree of concern is only 3.84, showing that the non-professional aspect of work gained only quite little attention relatively. It is noted that for the standard deviation of degree of concern, teaching had the smallest value while miscellaneous affairs had the greatest. This implies that teachers are most consistent in the work they concerned the most while are most diversified in the least concerned work.

TABLE 8

Degree of Concern of Teachers in Various Work Categories

Work category	Degree of Concern		
	Mean	Standard Deviation	Range
Teaching	6.64	0.68	1-7
Extracurricular Activity	5.29	1.25	1-7
Guidance	5.35	1.19	1-7
Discipline	5.13	1.24	2-7
Administration	4.59	1.64	1-7
Miscellaneous Affairs	3.84	1.52	1-7

MOTIVATING POTENTIAL OF TEACHERS' JOB

Before analyzing teachers' work in terms of job characteristics, it is necessary to clarify the representation of the overall motivating potential of teachers' work. As an attempt to contribute in the controversial discussion on the way of calculating the motivating potential score, the writer tried to integrate 'degree of concern' in the formula. Table 9 shows comparison and relationship between the weighted and the normal motivating potential score. The latter is computed by averaging the motivating potential scores of all work categories. In the

former case, motivating potential score of each work categories was multiplied by a factor of the corresponding weighted degree of concern (i.e. degree of concern of a particular work category divided by the total degree of concern of all work categories) before the average value was computed.

TABLE 9
Overall Weighted and Normal Motivating Potential Score of Teachers' Work

	Mean	Standard Deviation	Range
Weighted MPS	105.15	68.66	1.5-343.0
MPS	102.75	67.73	1.5-343.0

The weighted motivating potential score is highly correlated to the normal motivating potential score (correlation coefficient = .9951, N=569). It seems that degree of concern itself is closely and positively related to the motivating potential score of teachers' work. Thus integrating a factor generated from degree of concern to calculate motivating potential is of no significance. Therefore, throughout the rest discussion, only the normal motivating potential score will be referred to.

Table 10 summarizes the perceived job characteristics of teachers' work both in terms of job dimensions of various work categories as well as that of teachers' work as a whole.

TABLE 10

Scores of Job Dimensions and Motivating Potential in Various Work Categories and Teachers' Work

Job Dimension and Motivating Potential						
Work Category	Task Identity	Autonomy	Feedback	Skill Variety	Task Significance	MPS
Teaching	6.26 H	5.66 H	5.05 H	4.45	5.92 H	177.07 H
Extracurricular Activity	5.59	5.12	4.72	4.15	4.94	118.35
Guidance	4.82	4.66	4.40	4.61 H	5.24	99.15
Discipline	4.45	4.07	4.27	4.36	5.07	84.77
Administration	4.41 L	3.55 L	4.13	4.06	4.71	71.90
Miscellaneous Affairs	4.73	3.56	3.90 L	3.15 L	4.11 L	58.80 L
Overall Work	5.19	4.49	4.44	4.06	5.06	100.28

H denotes the highest value of a column.
L denotes the lowest value of a column.

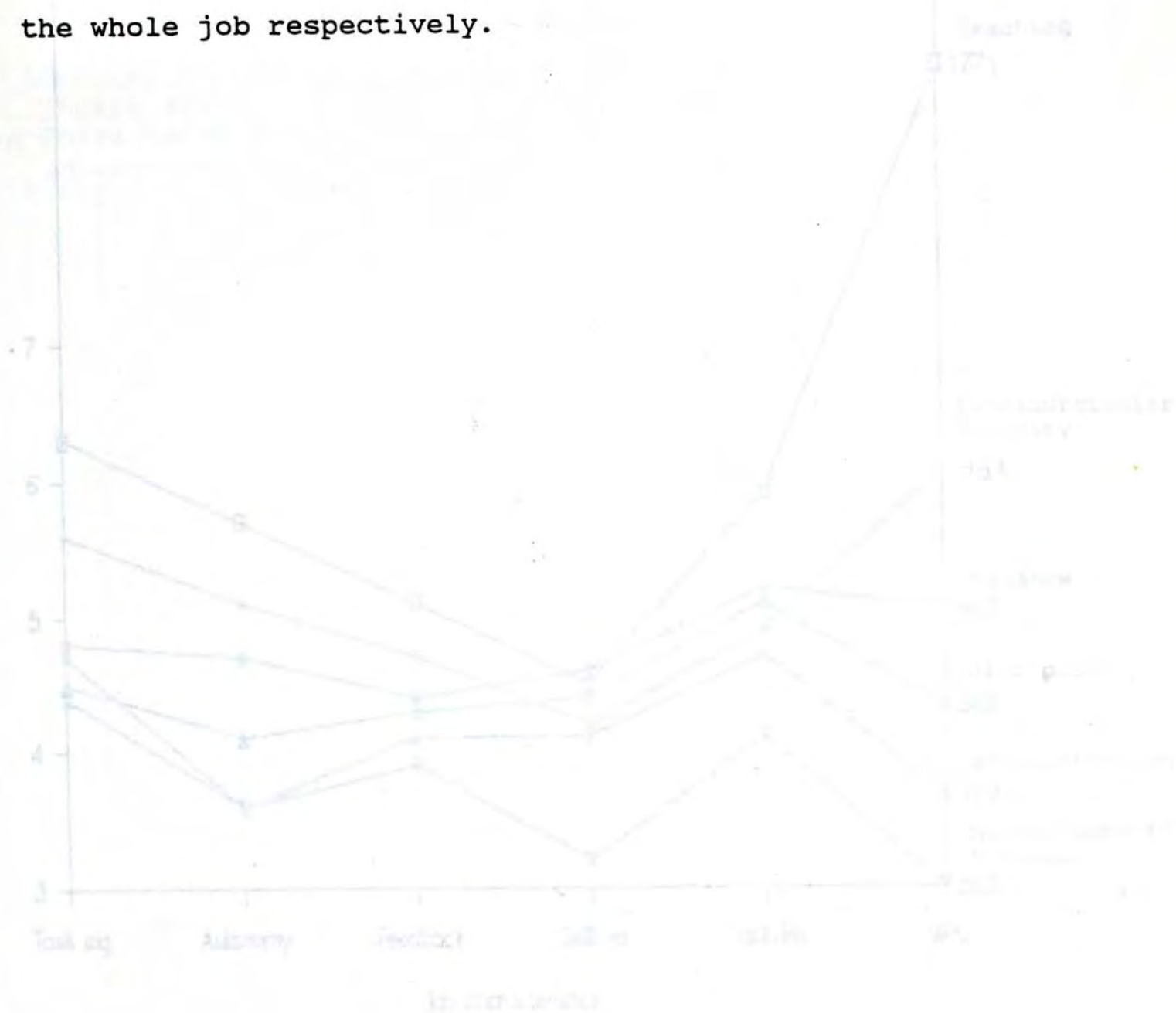
When teachers' work is considered as a whole, it is found that the score for task identity was the greatest while that for skill variety was the smallest among the five job dimensions. This reflects the phenomenon that teachers are required to finish many of the pieces of work they meet from the beginning to the end. This is particularly true concerning the scores of their teaching duty (6.26) and extracurricular activity (5.59). Low score in skill variety reflects that teachers' work may be routine or they have not the space to exercise their talents. It is known that the teaching and examination syllabuses in Hong Kong are very tight and time consuming to finish. The administrative and clerical work also often must be finished in a short time. Teachers thus often need to do urgent things, though these things may not be very important. However, the writer suspects that the overall skill variety may still be greater than that obtained here if the skills required in every work category are different. This in fact is quite probable. This calls for a deeper examination of skill variety in teachers' work in future. A more sophisticated method of calculation of skill variety score is needed.

If teachers' work is compared with the service work, which teachers' work may belong to, described by Hackman and Oldham (1980), it is found that the motivating potential score of teachers' work (100.28) is lower than the mean score of the service work (152). This difference is probably a significant one. Furthermore, even for the clerical work in Hackman and Oldham's summary, its motivating potential score (106) is found also greater than that of Hong Kong teachers' work if such a

difference is statistically significant. However, if only the teaching duty is considered, the motivating potential score of it (177.07) is considerably higher than the norm value (152) of American's service work (Hackman and Oldham, 1980, p.317). It seems that teachers' work is a rather challenging work only if in terms of the work category teaching. Together with other aspects related in teachers' work, the motivating potential of the whole work is diluted or decreased.

To analyze job dimensions in each work category, it is found that teaching scored nearly the highest in all job dimensions. In the only exception, skill variety, teaching still scored the second highest. It reveals again that teaching duty is the most challenging part of teachers' work. On the opposite end, miscellaneous affairs scored nearly the lowest in all job dimensions. In the two exceptions, task identity and autonomy, miscellaneous affairs scored the fourth and the fifth positions respectively. In the latter case, it was only 0.1 smaller than the score of administration and this difference was not significant at all. The most important factors that made teaching the most challenging and miscellaneous affairs the least challenging work may probably be autonomy and feedback. In calculating motivating potential score, autonomy and feedback were the two most sensitive variables. Here it shows that the two variables were highest in terms of teaching and lowest in terms of miscellaneous affairs. This is closely linked with the fact that teachers concerned teaching the most and miscellaneous affairs the least.

To appreciate the characteristics of teachers' job, graphical means may be more useful. Figures 3 and 4 show the patterns of job characteristics of various work categories and the whole job respectively.



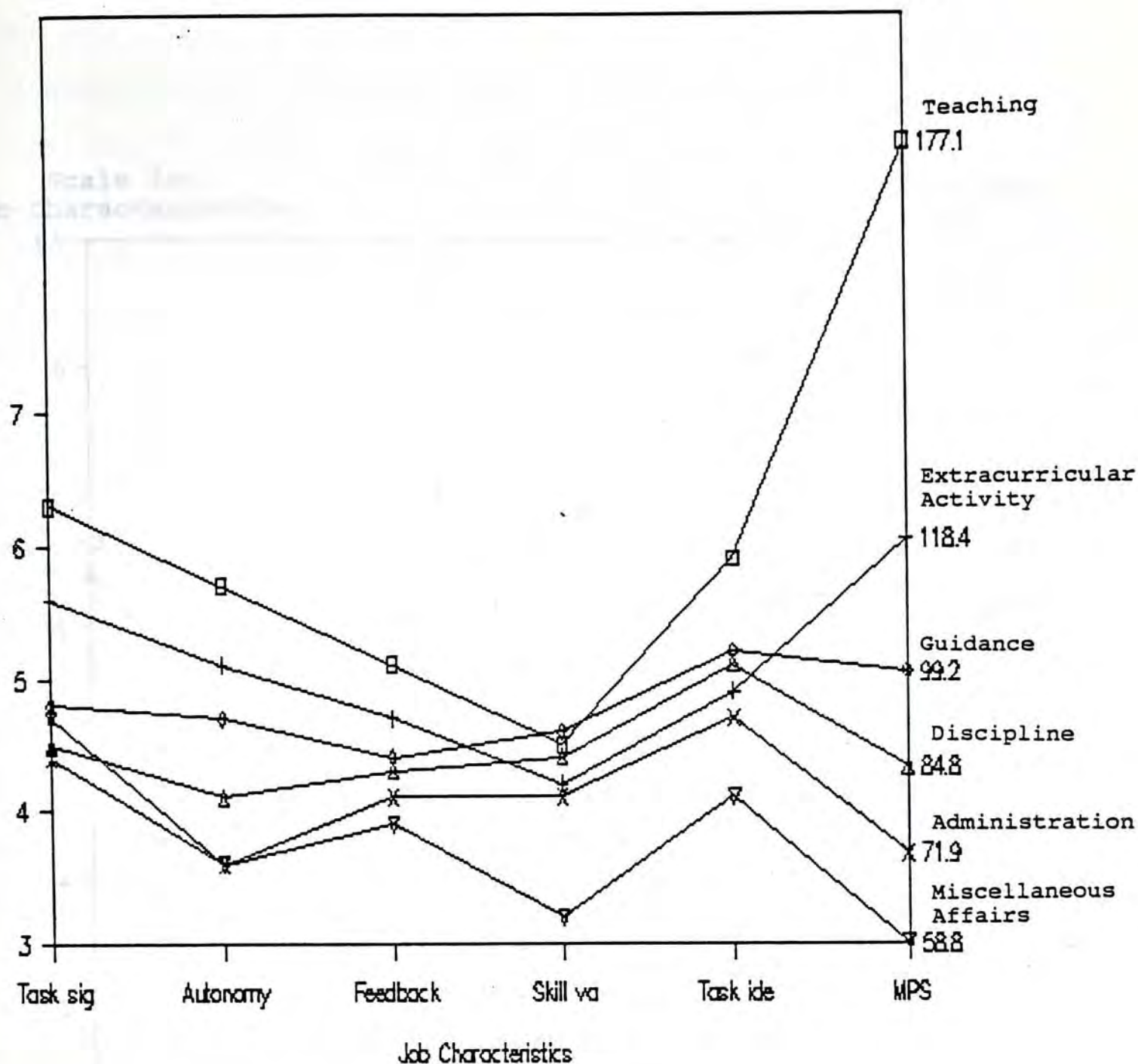
All pairs of work categories are significantly different from each other ($p < .05$) in job characteristics scores except:

- Guidance and Miscellaneous Affairs for Task Identity.
- Guidance and Teaching for Skill Variety.
- Extracurricular Activity and Discipline for Task Significance.
- Extracurricular Activity and Guidance for WFS.

FIGURE 3. Profiles of Job Characteristics of Six Work Categories and Teachers' Whole Job

Scale for
Job Characteristics

Scale for
MPS



All pairs of work categories are significantly different from each other ($p < .05$) in job characteristics scores except:

Guidance and Miscellaneous affairs for Task Identity.

Guidance and Teaching for Skill Variety.

Extracurricular Activity and Discipline for Task Significance.

Extracurricular Activity and Guidance for MPS.

FIGURE 3. Profiles of Job Characteristics of Six Work Categories and Teachers' Whole Job

From Figures 3 and 4, it is found that the profiles of teaching and extracurricular activity are mostly (nearly) to that of the overall work in terms of relative sizes of each job dimension score. In fact, teaching and extracurricular activity were found to be the two work categories that had the highest and

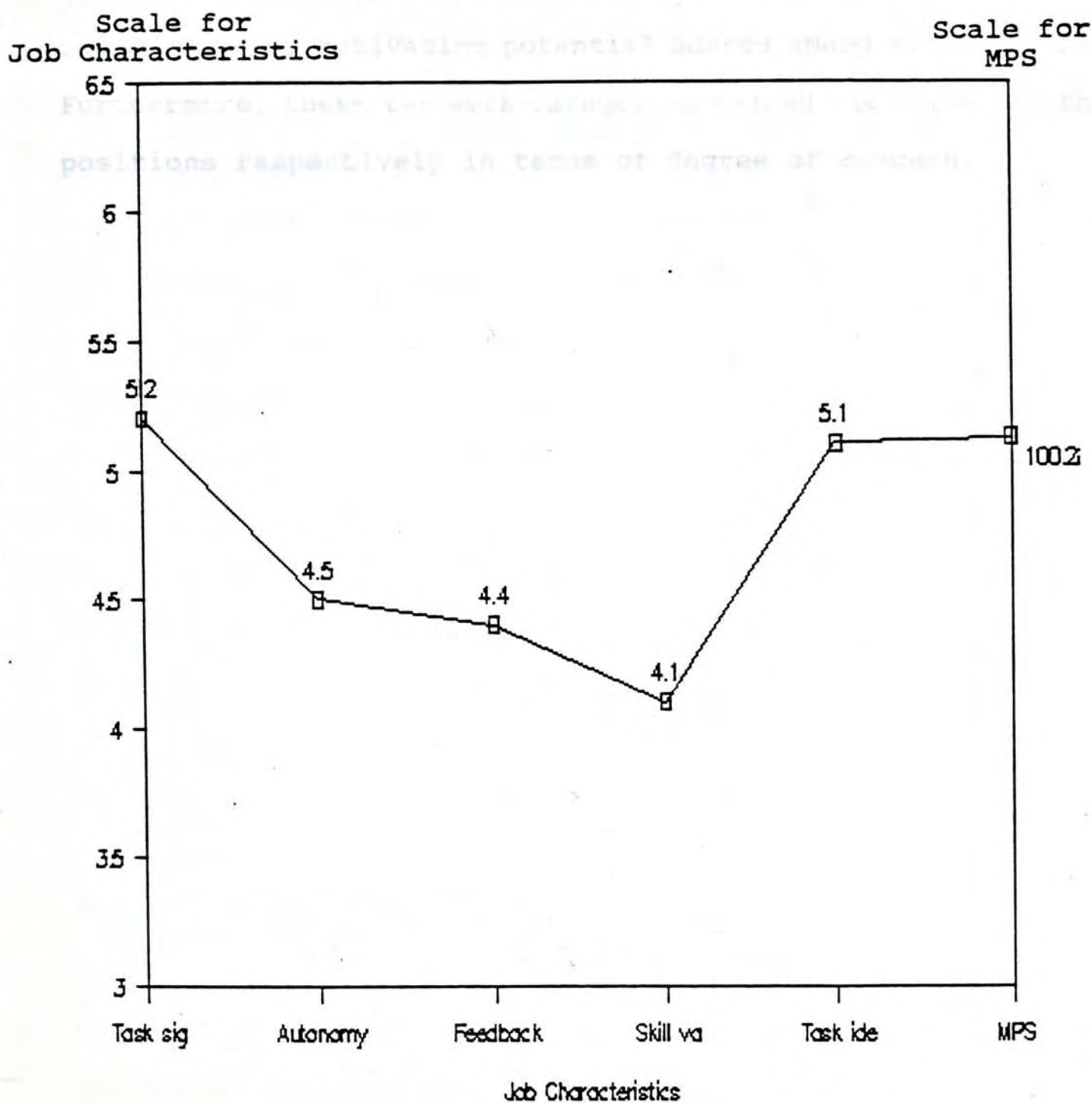


FIGURE 4. Profile of Overall Job Characteristics of Teachers' Job

C. FINDINGS RELATED TO RESEARCH QUESTION 2

The second research question is "How are teachers' personal attributes and strength of school ideology related to teachers' perception of job characteristics?" To reveal the above relationships, profiles of job characteristics with respect to some antecedents are plotted if significant differences of corresponding overall motivating potential scores were found among teachers of various characteristics.

Table 11 summarizes the result of ANOVA conducted on the motivating potential scores with subjects categorized by different potential antecedents. It is found that age, post, tenure in profession, tenure in school, marital status, teaching level and school ideology could impose differences in the motivating potential score of teachers' work. It is because the F values of the corresponding ANOVA conducted on these variables have significant levels ranging from .0000 to .0364, all of which of course are significant at the .05 significant level. For the rest variables, such a significant level is not reached. Of some antecedents identified in the literature (Fried & Ferris, 1986; Fried & Ferris, 1987), age, post, and tenure (subdivided into tenure in profession and tenure in school) are supported. However, educational level as an antecedent (in this study, it is termed qualification and professional training) is not supported. The reason may be that in the literature, spectrum of educational level of the employees was much larger than that investigated here. In fact, all teachers were generally highly educated though differences among them did exist.

TABLE 11 Post, teaching level and perceived school ideology

Analysis of Variance on Overall Motivating Potential Score with Respect to the Possible Antecedents

Possible Antecedent	Group no. & Group Label	Mean MPS	DF	F
Sex	1. Male	101	1,640	.1056
	2. Female	100		
Age	1. 21-30	90	2,543	5.0104**
	2. 31-40	104		
	3. >40	108		
Qualification	1. College of Education	107	5,636	1.7441
	2. Non-degree Tertiary Inst.	97		
	3. Bachelor	95		
	4. Master	125		
	5. Doctor	58		
Professional Training	1. Cert. of Education	105	3,569	.3064
	2. Bachelor of Education	98		
	3. Master of Education	108		
Post	1. Teacher Without Administration duty	87	4,634	10.7755****
	2. Teacher With Administration Duty	117		
	3. Panel head	107		
	4. Special master	130		
	5. Vice principal	141		
Tenure in Profession	1. 1-5 years	88	2,627	7.8525***
	2. 6-10 years	101		
	3. >10 years	112		
Tenure in School	1. 1-5 years	91	2,620	9.2279***
	2. 6-10 years	108		
	3. >10 years	116		
Marital status	1. single	91	2,637	6.9482**
	2. married	108		
Religion	1. No	100	5,635	.5021
	2. Christianity	112		
	3. Taoism	97		
	4. Buddhism	105		
	5. Catholicism	74		
Teaching Level	1. F.1-3	94	1,63	4.3959*
	2. F.4-7	105		
School Ideology	1. <3.87	95	1,62	4.9133*
	2. >3.87	106		

Using Scheffe procedure (for all t-values, p<.05), significant differences are identified between:

- Group 1 and group 3 for age and tenure in profession.
- Group 1 and any one of the other groups for post and tenure in school.
- Group 1 and group 2 for marital status, teaching level and school ideology.

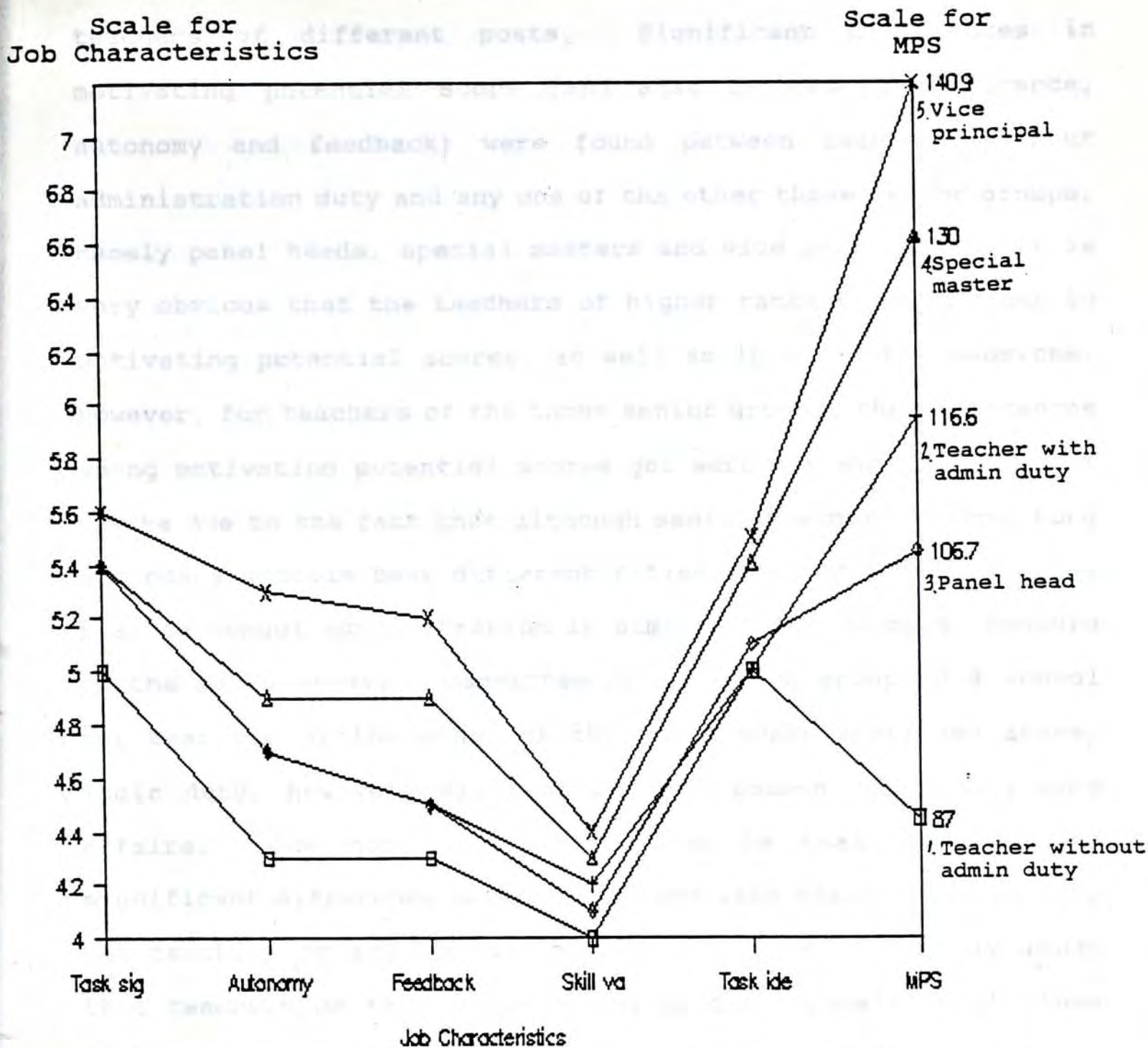
Significance of F values: * p<.05 ** p<.01 *** p<.001 **** p=.0000

As post, teaching level and perceived school ideology strength are the variables that education administrators may be able to manipulate in schools, profiles of job characteristics are plotted for these antecedents so as to give fuller pictures of the differences among different groups of teachers of such antecedents. For age, tenure in profession, tenure in school and marital status, discussion of differences in job characteristics among various groups of teachers will be made in text alone.

Teachers of ages 31-40 perceived their job with significantly greater motivating potential score (108) than teachers of ages 21-30 (96). In fact, teachers of the former group scored high in all job dimensions. This is probably because of the higher ranks these teachers occupied and the more teaching experience they had. This explanation is supported as teachers of higher ranks and teachers of greater tenure also found perceiving job with greater motivating potential. This will be discussed later. However, teachers of age greater than 40, on the other hand, shows no significant difference in motivating potential score got with the above two groups. This implies that some other relevant factors determining their job perception should be explored before clearer explanation can be formulated.

FIGURE 3: Profiles of job characteristics
Different Ages

Figure 5 shows the profiles of job characteristics of



Significant differences ($p < .05$) in job characteristics scores are found between:

For Feedback, 1-3, 1-4, 1-5, 2-5, 3-4, 3-5.
 For Task significance, Autonomy and MPS, 1-3, 1-4, 1-5.
 For Task identity, 1-4, 1-5.
 For Skill Variety, 1-4.

FIGURE 5. Profiles of Job Characteristics of Teachers Holding Different Posts

Figure 5 shows the profiles of job characteristics of teachers of different posts. Significant differences in motivating potential score (and also in task significance, autonomy and feedback) were found between teachers without administration duty and any one of the other three senior groups, namely panel heads, special masters and vice principals. It is very obvious that the teachers of higher ranks scored higher in motivating potential scores, as well as in all job dimensions. However, for teachers of the three senior groups, the differences among motivating potential scores got were not significant. It may be due to the fact that although senior teachers in Hong Kong secondary schools bear different titles, part of the roles they play in school administration is similar. For example, members of the administration committee or executive group in a school may bear one or the other of the three posts mentioned above. Their duty, however, may rest more on common and school-wide affairs. One more observation made is that there is no significant difference between teachers with administration duty and teachers of any of the other four groups. This may imply that teachers of this group belong to the 'transitional' class of teachers. Transitional is in the sense that these teachers may have more experience than the teachers without administration duty, so that they take up more responsibility in schools. They may probably be the potential candidates for promotion. In fact in Hong Kong a teacher can be promoted only after he/she has taken up some administration duty in his/her school. Post thus may be an important antecedent that leads to a differentiation among teachers in terms of job perception.

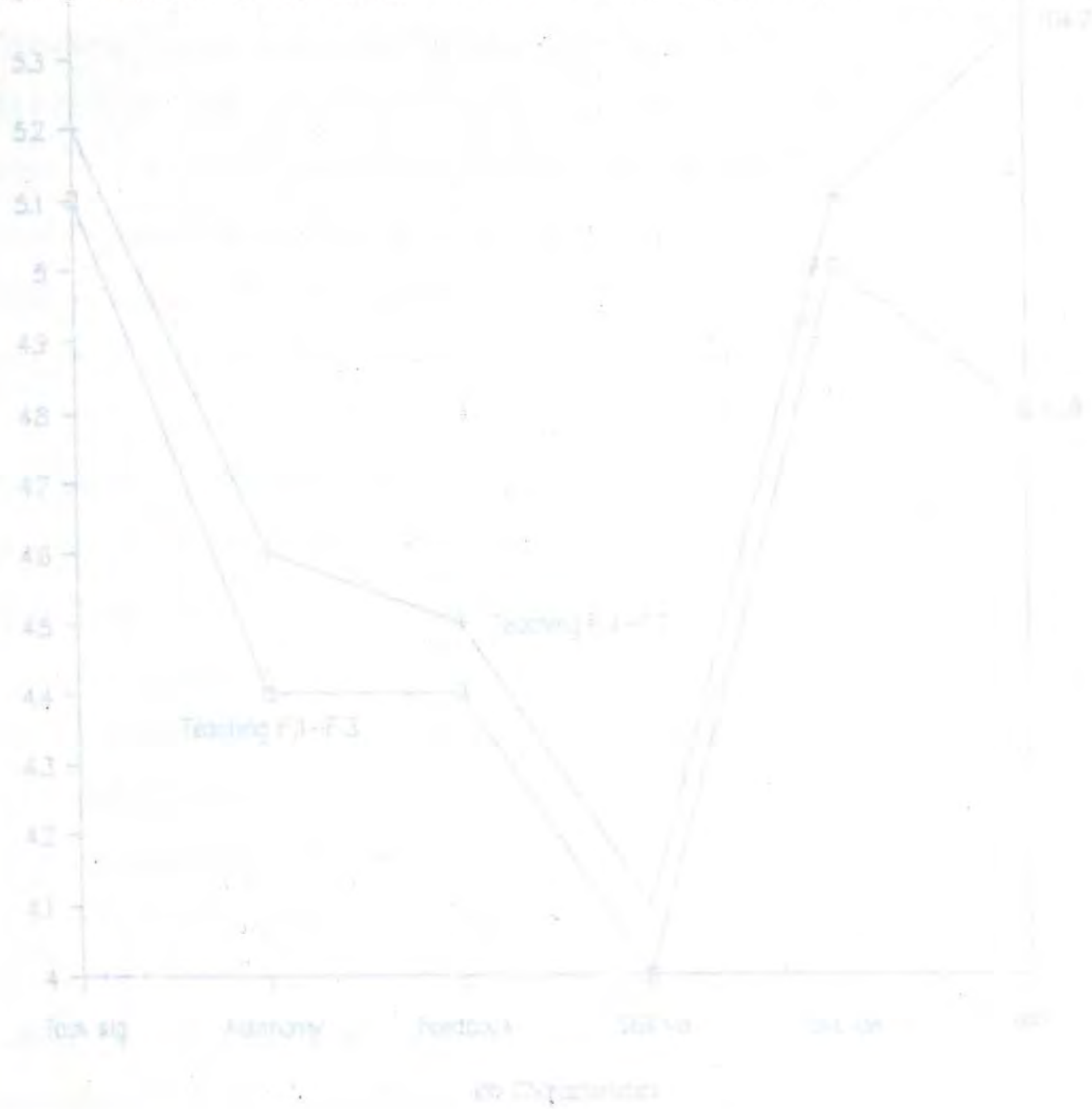
For teachers of different tenure in profession, it is found that teachers of longer tenure in profession (more than 10 years) perceived their job more challenging than teachers of shorter tenure (1-5 years) did. In all job dimensions, these teachers scored higher. The reason may be related to their teaching experience. In another perspective, if they did not like teachers' work, they would not have stayed in this profession for such a long period of time. This is of course a hypothesis that needs to be proved.

For tenure in the present school, it is found that teachers of either having tenure 6-10 years or more than 10 years in the present school perceived higher motivating potential scores and all job dimension scores of their job. This may be explained by the amount of teaching experience they had. Also, less difficulty or perceived failure may be felt by these two groups of teachers.

Comparing tenure in profession with tenure in school, it is found that in the latter, teachers of tenure in school 6-10 years scored significantly higher in motivating potential score than those of tenure 1-5 years. In tenure in profession, no corresponding result was got. This indirectly shows the possible effect of school factor itself. This further urges the study of organizational factor in job perception study.

For marital status, it is found that married teachers perceived their job with higher motivating potential score (108.05) than the single ones did (90.98). In all job dimensions, married teachers scored higher indeed. The writer does not think that marriage itself would bring about such effect

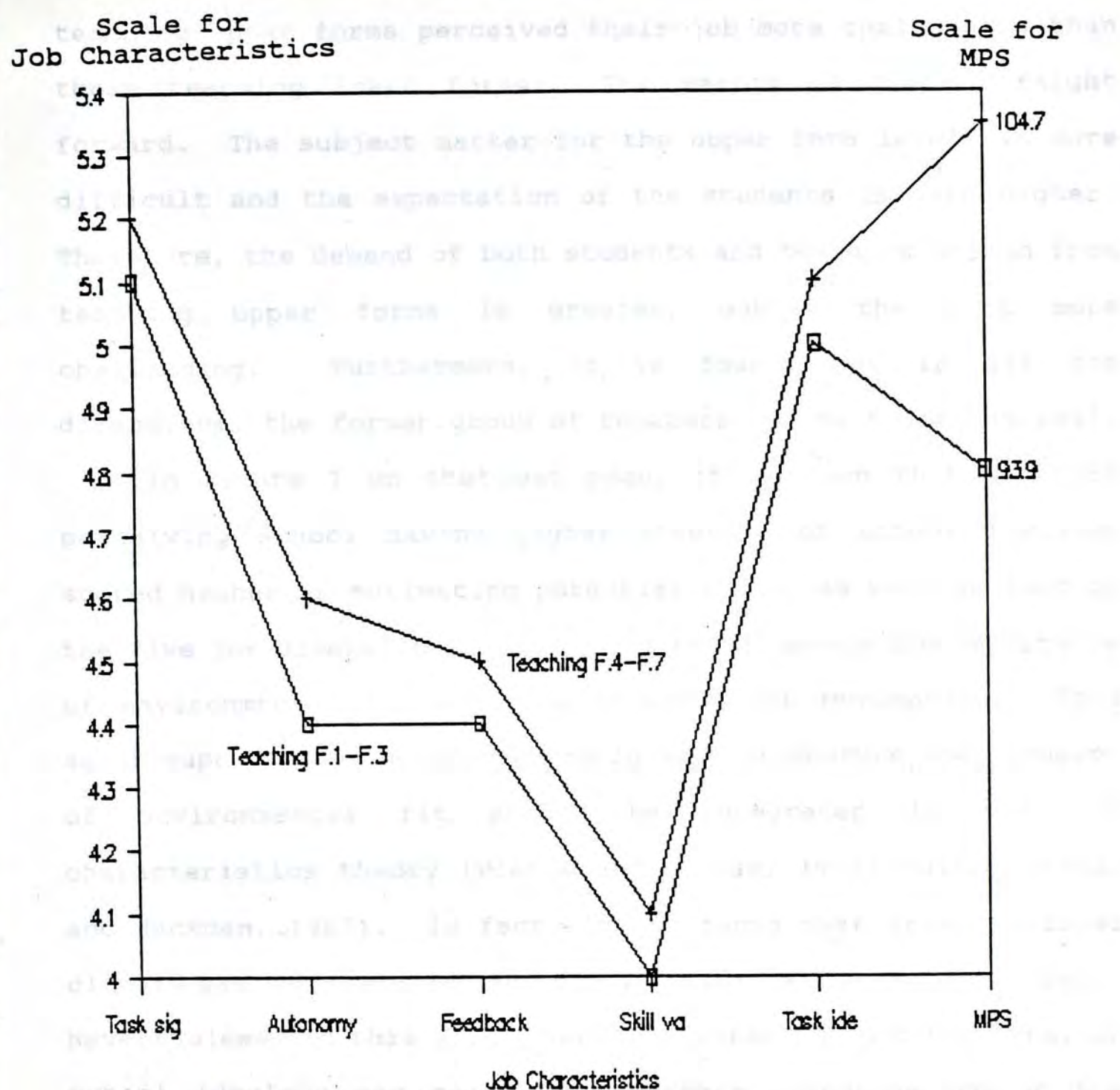
directly. The possible reasons may be because married persons are older and they probably occupy higher ranks in schools. Or, married persons may probably just be less adventurous and thus accept their work more than the single, younger teachers.



Significant differences ($p < .05$) are found in the corresponding job characteristics scores.

FIGURE 6. Profiles of Job Characteristics of Teachers Teaching Chiefly Upper and Lower Forms

Figure 6 shows the profiles for teachers teaching chiefly upper and lower forms respectively. It is seen that teachers



Significant differences ($p < .05$) are found in all corresponding job characteristics scores.

FIGURE 6. Profiles of Job Characteristics of Teachers Teaching Chiefly Upper and Lower Forms

Figure 6 shows the profiles for teachers teaching chiefly upper and lower forms respectively. It is seen that teachers teaching upper forms perceived their job more challenging than those teaching lower forms. The reason is quite straight forward. The subject matter for the upper form levels is more difficult and the expectation of the students is also higher. Therefore, the demand of both students and teachers arisen from teaching upper forms is greater, making the work more challenging. Furthermore, it is found that in all job dimensions, the former group of teachers scored higher as well.

In Figure 7 on the next page, it is seen that teachers perceiving school having higher strength of school ideology scored higher in motivating potential score, as well as four of the five job dimension scores. This result shows the importance of environmental influence on workers' job perception. This again supports the opinion found in many literature that concept of environmental fit should be integrated in the job characteristics theory (Pierce and Dunham, 1976; Kulik, Oldham and Hackman, 1987). In fact, it was found that organizational climate was important in managing an organization (Schein, 1985). Nevertheless, in this study, only the strength, not the type, of school ideology was measured. Further investigation on the content of school ideology and job perception is required.

Figure 6 shows the profiles for teachers teaching chiefly upper and lower forms respectively. It is seen that teachers teaching upper forms perceived their job more challenging than those teaching lower forms. The reason is quite straight forward. The subject matter for the upper form levels is more difficult and the expectation of the students is also higher. Therefore, the demand of both students and teachers arisen from teaching upper forms is greater, making the work more challenging. Furthermore, it is found that in all job dimensions, the former group of teachers scored higher as well.

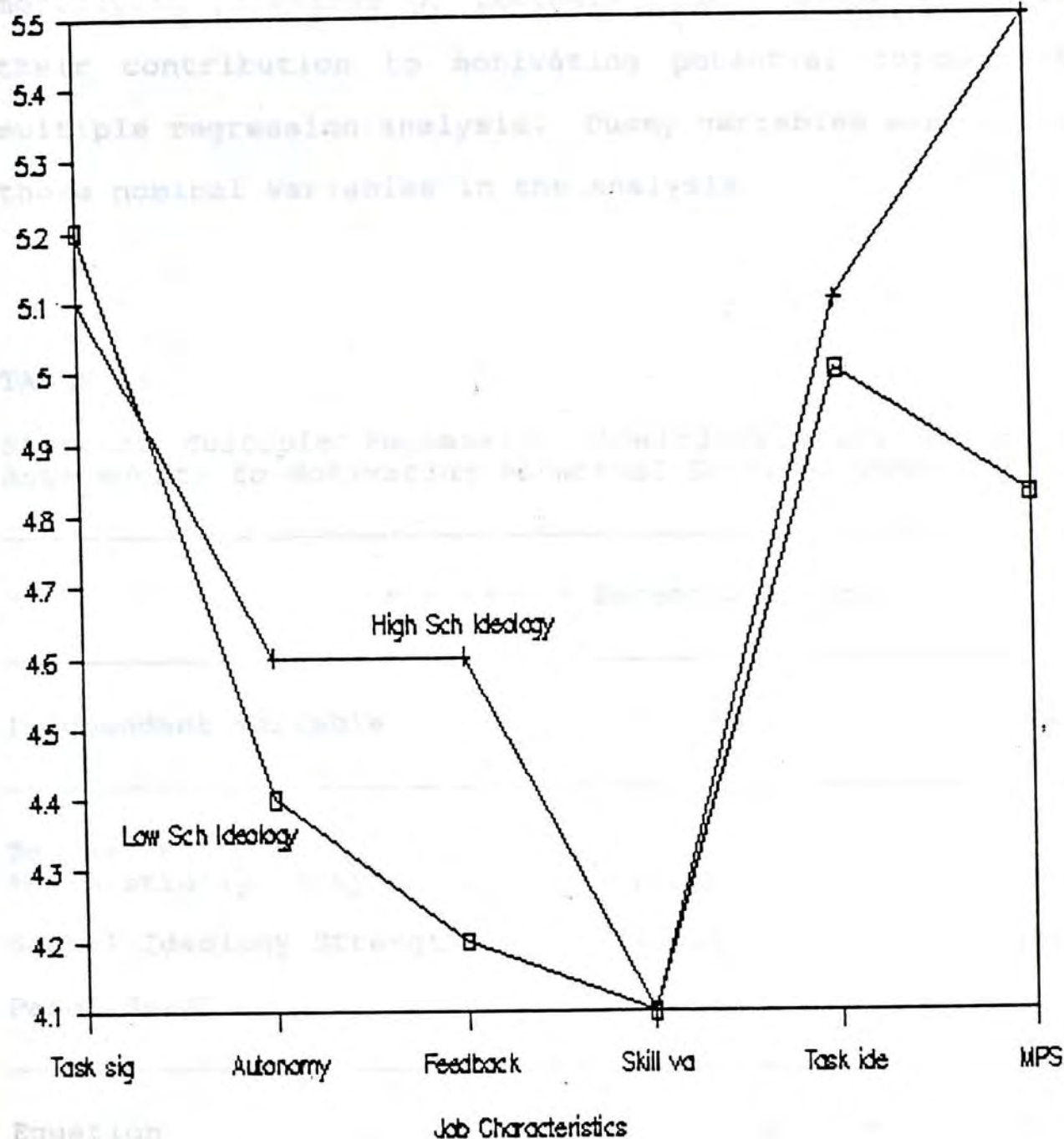
FIGURE 7 Profiles of Job Characteristics as Perceived by Teachers in Schools with High or Low Strength of School Ideology

PREDICTING POWER OF ANTECEDENTS ON MPS

Many antecedents were investigated in this study. In say

Scale for
Job Characteristics

Scale for
MPS



Significant differences ($p < .05$) of job characteristics scores are found in Feedback and MPS.

FIGURE 7. Profiles of Job Characteristics of Teachers Who Perceived High or Low strength of School Ideology in Their Schools

PREDICTING POWER OF ANTECEDENTS ON MPS

Many antecedents were investigated in this study. It may be suitable to summarize their overall predicting power on the motivating potential of teachers' job. Table 12 illustrates their contribution to motivating potential through stepwise multiple regression analysis. Dummy variables were created for those nominal variables in the analysis.

TABLE 12

Stepwise Multiple Regression Showing Contribution of Various Antecedents to Motivating Potential Score of Teachers' Job

Motivating Potential Score		
Independent Variable	B	Beta
Teacher Without Administration Duty ^a	-48.46	-.3696****
School Ideology Strength	11.17	.1700***
Panel Head ^a	-30.60	-.2037***
Equation	F =	19.73****
Statistics	df =	3,506
	R ² =	.1047

^a These variables are dummy variables in the regression equation.
Significance: ***p < .001 **** p = .0000

Two of the predictors were related to the posts held by teachers. Knowing whether a teacher was a teacher without administration duty or not or whether he/she was a panel head or not could help predicting their job perception in terms of motivating potential. As they had negative B values (as shown in the table), the direction of effect was an opposite one. It is understandable that an ordinary teacher who does not bear any administration duty may perceive their job less challenging. However, how about the panel heads? The writer suggests to explain this negative correlational relationship in the context of promotion. In Hong Kong, a teacher may be promoted if s/he is a panel head or a special master. In an aided secondary school, there usually are many panel heads as the number of subjects is generally large relative to the size of the staff team. However, the number of senior posts is limited. Some panel heads may not have the chance to be promoted. Furthermore, the senior posts are often firstly filled by special masters. This situation is particularly true in a well established school as all the vacancies might have been nearly filled. If a panel head needs to perform duty of greater workload in the absence of clear career prospect, s/he may probably feel frustrated. Their working morale will then be negatively affected. To verify this, more research on effect of promotion prospect is needed. The writer thinks this should be a very interesting and meaningful project.

Another significant predictor found was school ideology strength. Positive correlational relationship existed between this predictor and the motivating potential score. That means

stronger school ideology was related to higher motivating potential score. Concerning the R^2 value, it is found that only 10.47 % of the variance in motivating potential could be accounted for by the above three predictors. However, this predicting power was a very significant one.

To sum up, the antecedents investigated in this study could significantly predict motivating potential of teachers' job. In particular, post and school ideology strength could summarize the predicting effect and their effects were found in different directions. They may represent the contribution of personal and environmental factors respectively and thus the findings support the concept of person-environment fit in organizational behaviour researches.

D. FINDINGS RELATED TO RESEARCH QUESTION 3

The third research question is "How are perceived job characteristics related to teachers' affective outcomes in terms of job satisfaction, internal motivation and intention to quit their job?" This research question will be analyzed in two major parts. The first part is to find out the correlational relationship between job characteristics and the outcomes. The second part tries to see if growth need strength and school ideology strength could exert moderating effect to the above relationships.

BEHAVIORAL CONSEQUENCES OF JOB CHARACTERISTICS

Although in the questionnaire, job satisfaction and motivation were asked with respect to particular work categories, in this part of analysis, an overall job satisfaction score and an overall motivation score were calculated and investigated in the corresponding correlational studies. One of the reasons is that correlation among job characteristics (and motivation) of different work categories were found significantly correlated with one another. Actually, job satisfaction (and motivation) is a rather abstract feeling or psychological perception that breaking it down according to pieces of work aspect may not be clear and appropriate. Another reason of considering overall job satisfaction (and motivation) is that in literature, very often job satisfaction (and motivation) refers to the overall satisfaction (and motivation) towards the whole job. In

calculating the overall job satisfaction (and motivation) scores, the simple average method without any weighting was used.

This is presented in the literature (Hypothesis 1) in the investigation

TABLE 13

Correlation of Job Characteristics with Job Satisfaction, Motivation, Intention to Change the School and Intention to Change the Job

Job Characteristics	Behavioral Outcomes			
	Job Satisfaction	Motivation	Intention to Change the School	Intention to Change the Job
Overall MPS	.4502**	.3441**	-.1757**	-.1775**
Task Identity	.2617**	.2809**	-.1028**	-.0795
Autonomy	.3359**	.1870**	-.1941**	-.1668**
Feedback	.4788**	.2548**	-.2819**	-.2936**
Skill Variety	.1362**	.1785**	-.0301	-.1156**
Task Significance	.4013**	.4112**	-.1695**	-.2456**

2-tailed signif: * p<.01 ** p<.001. Minimum pairwise N of cases: 639

Table 13 is a correlation matrix that summarizes the correlational relationships between job characteristics and the outcomes chosen in this study. It is seen that motivating potential score did correlate with all the four outcomes.

Negative correlational coefficients were found in cases involving intention to change the school and intention to change the job. This is predictable according to both common sense and the literature (Spector and Jex, 1991).

To investigate the predicting power of the job characteristics on teachers' behavioral outcomes, stepwise multiple regression was conducted. Tables 14 to 17 show the results of these regression analyses. In each table, results of two regressions conducted on the same behavioral outcome were presented together. The first regression used the five job dimension as the independent variables while the second regression used the motivating potential score instead. The relative predicting power of the job dimensions and the motivating potential, the composite measure of the former, can be compared.

Table 14 shows that the motivating potential score predicted better than the five job dimensions when predicting the dependent variable. The predicting power of the motivating potential score was about 31% while the predicting power of the five job dimensions was about 21%. The corresponding percentages were 22% and 11% respectively. This indicates that the motivating potential score predicted the dependent variable better than any of the job dimensions. This is because of the magnitudes of the beta values.

TABLE 14

TABLE 14

Stepwise Multiple Regression Showing Contribution of Job Dimensions and Motivating Potential Score of Teachers' Job Respectively to Teachers' Job Satisfaction

Job Satisfaction					
Independent Variable	B	Beta	Independent Variable	B	Beta
Feedback	.2894	.3204****	MPS	.0062	.4502****
Task Significance	.2071	.2116****			
Autonomy	.1245	.1479****			
Task identity	.0872	.0882**			
Equation	F =	95.73****	F =	163.19****	
Statistics	df =	4,836	df =	1,642	
	R ² =	.3142	R ² =	.2027	

Significance: **p < .01 **** p = .0000

Table 14 shows that the percentage error of variance reduced when predicting job satisfaction using job dimensions as predictors (only four of them were significant predictors) was about 31 %. If motivating potential score was used instead, the corresponding percentage was about 20 %. It should be noted that the motivating potential score predicted job satisfaction better than any of the job dimensions. This is revealed by the magnitudes of the beta values.

TABLE 15

Stepwise Multiple Regression Showing Contribution of Job Dimensions and Motivating Potential Score of Teachers' Job Respectively to Teachers' Motivation

Motivation					
Independent Variable	B	Beta	Independent Variable	B	Beta
Task Significance	.2565	.3219****	MPS	.0039	.3441****
Task Identity	.1503	.1829****			
Skill Variety	.0479	.0660*			
Feedback	.4996	.0665*			
Equation	F =	57.87****	F =	86.24****	
Statistics	df =	4,836	df =	1,642	
	R ² =	.2169	R ² =	.1184	

Significance: * p < .05 **** p = .0000

Table 15 shows that the percentage error of variance reduced when predicting motivation using job dimensions as predictors (only four of them were significant predictors) was about 22 %. If motivating potential score was used instead, the corresponding percentage was about 12 %. It should be noted that the motivating potential score predicted motivation better than any of the job dimensions. This is revealed by the magnitudes of the beta values.

TABLE 16

Stepwise Multiple Regression Showing Contribution of Job Dimensions and Motivating Potential Score of Teachers' Job Respectively to Teachers' Intention to Change the School

Intention to Change the School					
Independent Variable	B	Beta	Independent Variable	B	Beta
Feedback	-.3661	-.2277****	MPS	-.0043	-.1757****
Autonomy	-.1794	-.1198***			
Equation	F =	38.70****	F =	20.40****	
Statistics	df =	2,836	df =	1,640	
	R ² =	.0847	R ² =	.0309	

Significance: *** p < .001 **** p = .0000

Table 16 shows that the percentage error of variance reduced when predicting intention to change the school using job dimensions as predictors (only two of them were significant predictors) was about 8 %. If motivating potential score was used instead, the corresponding percentage was only about 3 %. It should be noted that the motivating potential score was not a better predictor in predicting intention to change the school when compared with the individual job dimensions. This is revealed by the magnitudes of the beta values.

TABLE 17 Table 16 to 18 are considered together

Stepwise Multiple Regression Showing Contribution of Job Dimensions and Motivating Potential Score of Teachers' Job Respectively to Teachers' Intention to Change the Job

Intention to Change the Job					
Independent Variable	B	Beta	Independent Variable	B	Beta
Feedback	-.3117	-.1823****	MPS	-.0046	-.1775****
Task Significance	-.2926	-.1617****			
Autonomy	-.1130	-.0714*			
Equation	F =	32.12****	F =	20.72****	
Statistics	df =	3,831	df =	1,637	
	R ² =	.1039	R ² =	.0315	

Significance: * p < .05 **** p = .0000

Table 17 shows that the percentage error of variance reduced when predicting intention to change the job using job dimensions as predictors (only two of them were significant predictors) was about 10 %. If motivating potential score was used instead, the corresponding percentage was only about 3 %. It should be noted that the motivating potential score was not a better predictor in predicting intention to change the job when compared with the individual job dimensions. This is revealed by the magnitudes of the beta values.

When Tables 14 to 17 are considered together, more information are obtained. It is found that job characteristics had stronger predicting power in predicting job satisfaction and motivation than in predicting intention to change the school and intention to change the job. In fact, job satisfaction and motivation may represent the positive work attitudes and intention to change the school and intention to change the job may represent the negative work attitudes of teachers respectively. Job characteristics in terms of motivating potential in fact is considered as an intrinsic reward (Hackman & Oldham, 1980). In this sense, the finding mentioned above can find its support from the famous motivation-hygiene theory (Herzberg, 1966). In this theory, job satisfaction (a positive attitude) and job dissatisfaction (a negative attitude) were found to be two different continua. Intrinsic reward was found in general more correlated to job satisfaction while extrinsic reward was found in general more correlated to job dissatisfaction. Thus motivating potential relates more to job satisfaction. As motivation by definition is an intrinsic drive (in the job characteristics theory it is termed internal work motivation), it is not surprising that it can also be better predicted by job characteristics. A further support to the above discussion is that motivating potential score was found to be a better predictor (as stated in the job characteristics theory) when compared with individual job dimension scores only in predicting job satisfaction and motivation, but not in predicting intention to change the school and intention to change the job.

There were other evidence supporting that the effect of job

characteristics on intention to quit the job was not a direct one. Michaels and Spector (1982) pointed out by path analysis that job satisfaction was an intervening variable in between them. Knoop (1982) suggested that job characteristics only caused career alienation which might be a step in advance of the intention to quit the job. Other factors, not studied in this research, may be much more powerful in determining the quitting intention. These may include the economic condition of the society, the employment situation of other occupations, the pay scale of teaching profession, the prospect of teaching career, and even the time in which the question about such an intention is asked (Cooke, 1990) (in this study the question was asked in the middle of the academic year). To sum up, job characteristics alone seems able to significantly predict teachers' attitudinal outcomes, but other factors should not be neglected and actually must be explored if deeper and more complete understanding of teachers' behaviour is really the matter.

Some other observations are worth pointing out here. Among the four outcomes, job satisfaction could be predicted by motivating potential score the most, the corresponding error reduced in such prediction is 20.27%. In a number of studies in the past, job satisfaction was also found predicted relatively better than the other outcomes (Hackman and Oldham, 1975; Oldham, 1976; Brief and Aldag, 1975). Among the job dimensions, feedback was found to be the best predictor in predicting three out of the four outcomes (in case of motivation, it was still a significant predictor, though not the best). This is quite different from the result of the past studies that feedback was not a good

predictor of behavioral outcomes (Hackman & Lawler, 1971; Hackman & Oldham, 1976; Wall, Clegg & Jackman, 1978; Kiggundu, 1980; Becker & Klimoski, 1989). This indicates that including all sources of feedback in this dimension as done in this study is on the right track. It seems that to detect teachers' attitude, feedback is the most likely probe one can use. On the contrary, skill variety was found not to be a significant predictor in predicting three out of the four outcomes. However, as it has been mentioned earlier, the score of skill variety in teachers' work may probably be underestimated. More study is required before drawing any concrete conclusion.

In this study, it was proposed that teachers' work can also be studied in terms of six work categories. The following table and paragraphs make discussion on the predicting power of the motivating potential of these work categories on teachers' behaviour.

TABLE 18 *How much more successful in predicting behavioral outcomes*

Stepwise Multiple Regression Showing Contribution of Motivating Potential Scores of Various Work Categories to Various Teachers' Behavioral Outcomes Respectively

Behavioral Outcomes								
Job Satisfaction			Motivation			Intention to Change the Job		
Independent Variable	B	Beta	Independent Variable	B	Beta	Independent Variable	B	Beta
MPS of Teaching	.0074	.5531*	MPS of Guidance	.0076	.6162***	MPS of Guidance	-.0135	-.5699*
			MPS of Extracur Activity	.0045	.4984**			

Equation statistics

F =	5.29*	F =	23.07***	F =	5.29*
df =	1,12	df =	2,11	df =	1,11
R ² =	.3059	R ² =	.8117	R ² =	.3248

For intention to change the school, no independent variable was found entered into the regression equation.

significance: * p<.05 ** p<.01 *** p<.001 **** p =.0000

In Table 18, it is seen that using motivating potential scores of individual work categories to predict teachers' behavioral outcomes is generally successful. If compared job dimension scores or the overall motivating potential score, motivating potential scores of individual work categories were

found to be much more powerful in predicting motivation and more powerful in predicting intention to change the job. To predict job satisfaction, about equal predicting power was found. The R^2 values found in cases of job satisfaction, motivation and intention to change the job are respectively 30.95 %, 81.17 % and 32.48 %. However, no significant predictor can be identified when predicting intention to change the school. At this moment no explanation of this can be made. Further investigation on this is required. Nevertheless, this implies that intention to change the school and intention to change the job may be two different things. Thus greater care should be taken in conceptualizing the intention of quitting the present post of a teacher. To sum up, generally speaking, delineating nature of teachers' job into six work categories is on the right track in researching nature of teachers' job and their work behaviour.

It is found that 'teaching' was the most significant predictor to predict job satisfaction. This corresponds well to the previous claim that teacher concerned teaching the most and they spent most of their working time on it. The education administrators must take serious consideration on improving the context of teaching if they want their staff to be happy teachers.

For motivation, it is guidance and extracurricular activities that were the most powerful predictors. Indeed their joint predicting power was extraordinarily great. The writer strongly recommends education administrators to pay attention on this finding. These two categories of work allow teachers to get informal contact with students probably in a positive atmosphere

perceived by both parties. In fact, teachers can have relatively more demonstration and elaboration of their talents through performing such categories of work. More space for expressing oneself may generate and encourage a self-motivated teacher.

For intention to change the job, guidance played a most significant role. Teachers who scored low in motivating potential score of guidance were more likely the candidates of changing the job if there existed a positive correlation between intention to leave the job and the actual action of doing it. In fact, in the context of guidance, values and value judgement on student growth and human rights are often involved. Conflict on such subjects may induce serious antagonistic attitudes. If a teacher is disappointed to the values existing in the education field, or he/she cannot get feeling of success in such duties, he/she may probably want to leave the profession. Therefore, low motivating potential in guidance may lead to intention to change the job in some teachers.

To sum up, high motivating potential in duties of teaching, guidance and extracurricular activity were correlated to positive attitudes including job satisfaction and motivation of teachers. On the other hand, lacking of motivating potential in guidance may lead to teachers' intention to change the job. To research nature of teachers' job in terms of different work categories may be a promising and fruitful approach.

MODERATING EFFECTS OF GROWTH NEED STRENGTH AND SCHOOL
IDEOLOGY STRENGTH

It is supposed that the correlational relationships between motivating potential score and the behavioral outcomes may be made clearer if moderators of these relationships are identified. Two possible moderators are included in this study, they are growth need strength and school ideology strength. Their roles of moderators were partly supported by the findings.

In the following analysis, the correlational relationships between the job characteristics and the behavioral outcomes will be investigated with respect to teachers of high growth need strength, low growth need strength need strength, high school ideology strength and low school ideology strength groups. It will be seen that from the findings, the roles of the two moderators seem to be very probable. To confirm the interaction effects, stepwise multiple regression will then be employed. Motivating potential score, growth need strength (or school ideology strength) and their product will be the predictors used to predict the behavioral outcomes. It will be seen that in some cases, the interaction effects are found significant.

TABLE 19

Correlation of Job Characteristics with Job Satisfaction, Motivation, Intention to Change the School and Intention to Change the Job in Teachers of High and Low Growth Need Strength Groups

Job Characteristics		Behavioral Outcomes			
		Job Satisfaction	Motivation	Intention to Change School	Intention to Change Job
Overall MPS	L GNS	.4369**	.2521**	-.1095	-.0537
	H GNS	.4539**	.3840**	-.2190**	-.2475**
Task Identity	L GNS	.2557**	.2044**	-.0471	-.0475
	H GNS	.2730**	.3237**	-.1515**	-.1114*
Autonomy	L GNS	.2578**	.0690	-.1428*	-.1143
	H GNS	.3944**	.2589**	-.2374**	-.2082**
Feedback	L GNS	.4510**	.2518**	-.2515**	-.2009**
	H GNS	.4988**	.2623**	-.3027**	-.3554**
Skill Variety	L GNS	.0610	.0989	-.0016	-.0275
	H GNS	.1852**	.2040**	-.0564	-.1782**
Task Significance	L GNS	.4032**	.3486**	-.1468*	-.2097**
	H GNS	.4123**	.4458**	-.1982**	-.2839**

L GNS: Low growth need strength group
H GNS: High growth need strength group

Minimum number of pairwise cases: Overall MPS for low GNS group: 296
Overall MPS for high GNS group: 340
Job dimensions for low GNS group: 451
Job dimensions for high GNS group: 503

2-tailed Significance: * p < .01 ** p < .001

In Table 19, correlation of job characteristics with teachers' behavioral outcomes was made separately for high and low growth need strength groups. Teachers were allotted to these groups according to whether their growth need strength score were over or below the mean value.

It was observed that with only two exceptions (in which skill variety and task identity had no significant correlation with intention to change the school and intention to change the job respectively in both groups), in all cases, including all job dimension scores and the overall motivating potential score, as well as in all behavioral outcomes, correlational relationships were found stronger in the high growth need strength group. This is in line with literature that the well documented growth need strength was a strong moderator in the relevant relationship of job characteristics and workers' outcomes (Bhagat and Chassie, 1980; Hackman, Pearce and Wolfe, 1978, Orpen, 1979; Kulik, Oldham and Hackman, 1987; Loher, 1985; Spector, 1985; Fried and Ferris, 1987). In the literature, growth need strength was usually found moderating motivating potential score and behavioral outcome in the context of one behaviour only. However, in the present study, all job dimensions show stronger correlational effect with all four behavioral outcomes. Therefore, the conclusion that growth need strength is a strong moderator seems very probable. This agrees to what the literature said (Hackman and Lawler, 1971; Hackman and Oldham, 1976). Furthermore, with respect to the overall motivating potential score, the relationships concerned with both intention to change the school and intention to change the job were significant only in the high growth need

strength group. Also, some other correlational relationships are also found significant only in the high growth need strength group with respect to job dimensions. These include the following correlations: between task identity and intention to change the school, between task identity and intention to change the job, between autonomy and motivation, between autonomy and intention to change the job, between skill variety and job satisfaction, between skill variety and motivation, and between skill variety and intention to change the job. Skill variety is the job dimension in which teachers of high and low growth need strength differed greatly in terms of whether significant correlations were found between motivating potential score and the behavioral outcomes. Two possible reasons may account for this. The first reason is that teachers of low growth need strength were those who did not appreciate work that needs more skills; or simply they like to do routine and simple work relatively. The second reason (indeed it is not an explanation) is that as mentioned before, measurement of overall skill variety had some innate problem by definition. If this is true, no firm conclusion can be made at this moment.

TABLE 20 shows the correlation matrix between the variables.

Correlation of Job Characteristics with Job Satisfaction, Motivation, Intention to Change the School and Intention to Change the Job in Teachers of High and Low Perceived School Ideology Strength Groups

Job Characteristics		Behavioral Outcomes			
		Job Satisfaction	Motivation	Intention to Change School	Intention to Change Job
Overall MPS	L SIS	.3828**	.3132**	-.1133	-.1141
	H SIS	.5055**	.3815**	-.2061**	-.2143**
Task Identity	L SIS	.1908**	.2827**	-.0797	-.0302
	H SIS	.3707**	.2830**	-.1730**	-.1622**
Autonomy	L SIS	.2908**	.1622**	-.1594**	-.1224*
	H SIS	.3947**	.2221**	-.2212**	-.2203**
Feedback	L SIS	.4049**	.2151**	-.1923**	-.2404**
	H SIS	.5261**	.3359**	-.3182**	-.2876**
Skill Variety	L SIS	.1302*	.2414**	.0196	-.1235*
	H SIS	.1362*	.1101	-.0970	-.1106
Task Significance	L SIS	.3825**	.4780**	-.1064	-.2275**
	H SIS	.4072**	.3563**	-.2243**	-.2402**

L SIS: Low perceived school ideology strength group
H SIS: High perceived school ideology strength group

Minimum number of pairwise cases: Overall MPS for low SIS group: 316
Overall MPS for high SIS group: 309
Job dimensions for low SIS group: 470
Job dimensions for high SIS group: 497

2-tailed Significance: * p < .01 ** p < .001

Table 20 shows the correlation matrix correlating job characteristics with the four behavioral outcomes respectively for teachers of high and low school ideology strength group. It seems generally true that the correlational relationships were stronger in the high perceived school ideology strength group. Furthermore, in the following relationships, correlations were found significant only in high perceived school ideology strength group: between overall motivating potential score and intention to change the school, between overall motivating potential score and intention to change the job, and between task identity and intention to change the job. In the case between skill variety and intention to change the school, correlation coefficient is not significant in both groups. In some cases, the said moderating effect of school ideology strength seems true but in other directions. In the case of task significance and motivation, the relationship is stronger in the low perceived school ideology strength group instead. In cases between skill variety and motivation, and between skill variety and intention to change the job, significant relationships are found only in the low perceived school ideology strength group. Overall speaking, perceived school ideology strength was proved in many situations moderating the relationship between job characteristics and behavioral outcomes in a considerably consistent manner. Furthermore, it should be noted that three out of the four exceptional relationships found have skill variety involved, which may be a problematic job dimension in terms of the rationale of calculation mentioned earlier. If this is really the case, then the only valid counter example left is

the relationship between task significance and motivation. One point must be noted, however, that according to the job characteristics theory, the major concern is laid on the relationship between motivating potential score, not the job dimensions, and work or behavioral outcomes. In this sense, the role of perceived school ideology strength as a moderator could be said to have really been supported. Furthermore, it should be clarified that in this study, it is the strength, not the type, of perceived school ideology that is of interest. The writer suspects that if the content of school ideology is delineated, more light may be shed on the role it plays.

Although results of Tables 19 and 20 seem generally supporting the potential moderating roles of growth need strength and perceived school ideology strength, firm conclusion cannot be assured. Therefore, stepwise multiple regression using data of the whole sample was employed to clarify the said moderating effects.

Interaction effects of growth need strength and motivating potential score are found significant in predicting motivation ($B=.0007$, $Beta=.00985$, $df=2,637$, $F=59.14$, $p=.0000$) and intention to change the job ($B=-.0010$, $Beta=-.2041$, $df=1,634$, $F=27.56$, $p=.0000$). Interaction effect of school ideology strength and motivating potential score is found significant in predicting job satisfaction ($B=.0043$, $Beta=.4854$, $df=1,625$, $F=192.62$, $p=.0000$). Thus moderating roles of the two moderators are confirmed in these three cases.

To demonstrate graphically the significant moderating effects, Figures 8 and 9 show the some regression lines of

behavioral outcomes versus motivating potential score. The regression lines are constructed by using motivating potential score of low and high strength groups respectively as the unique predictor to predict the behavioral outcomes. The full theoretical range of motivating potential score (i.e. 1 to 343) will be employed. Figure 8 shows the regression lines of motivation versus motivating potential score in low and high growth need strength groups. Figure 9 shows the regression lines of job satisfaction versus motivating potential score in low and high school ideology strength groups. For intention to change the job versus motivating potential score in low and high growth need strength groups, no graph is presented as the motivating potential score could not enter the corresponding regression equation. In both cases shown, the slopes of the lines are greater in the high strength groups.



FIGURE 9. Regression lines of job satisfaction versus motivating potential score in low and high school ideology strength groups.

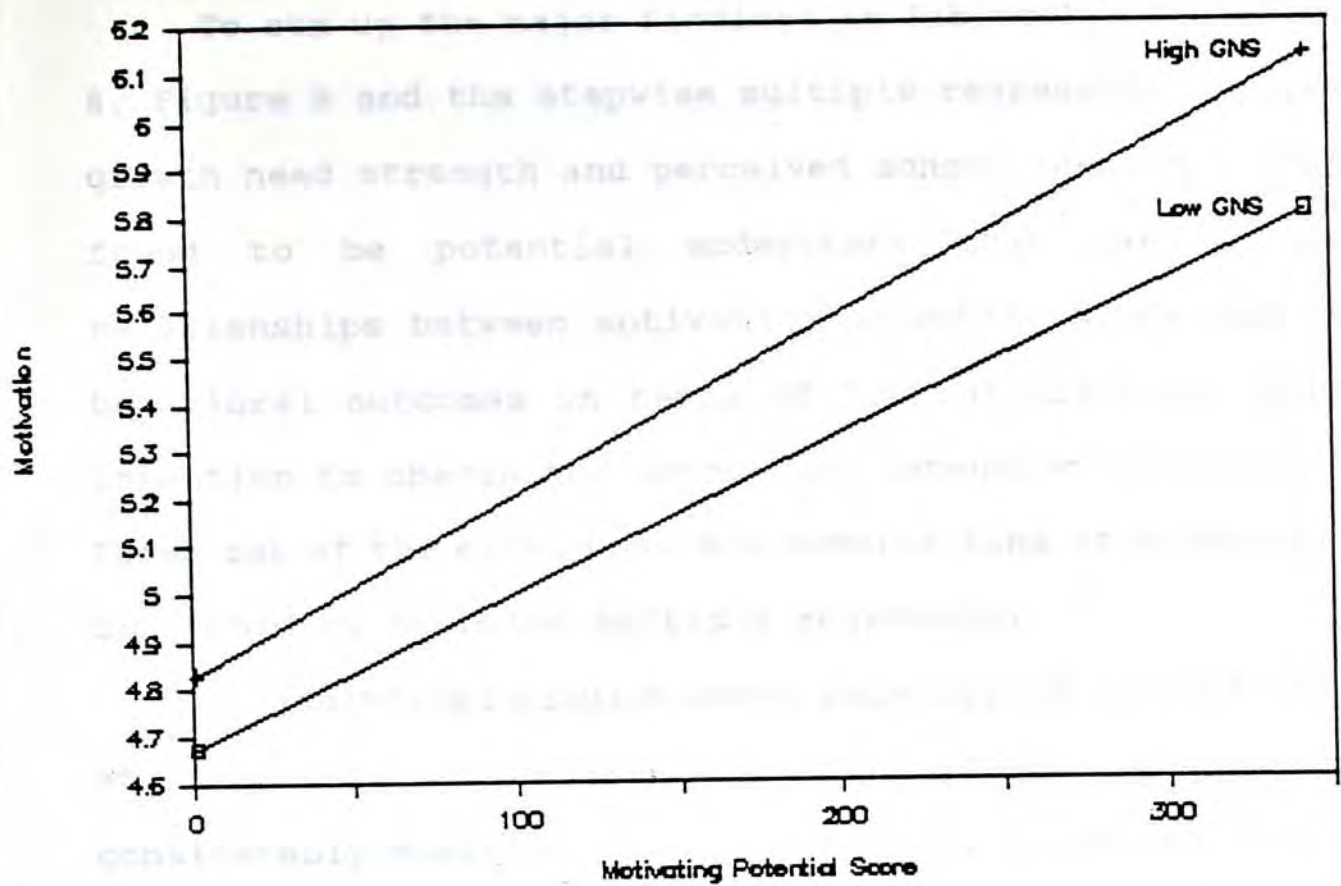


FIGURE 8. Regression Lines of Motivation vs MPS for Teachers of Low and High Growth Need Strength Groups

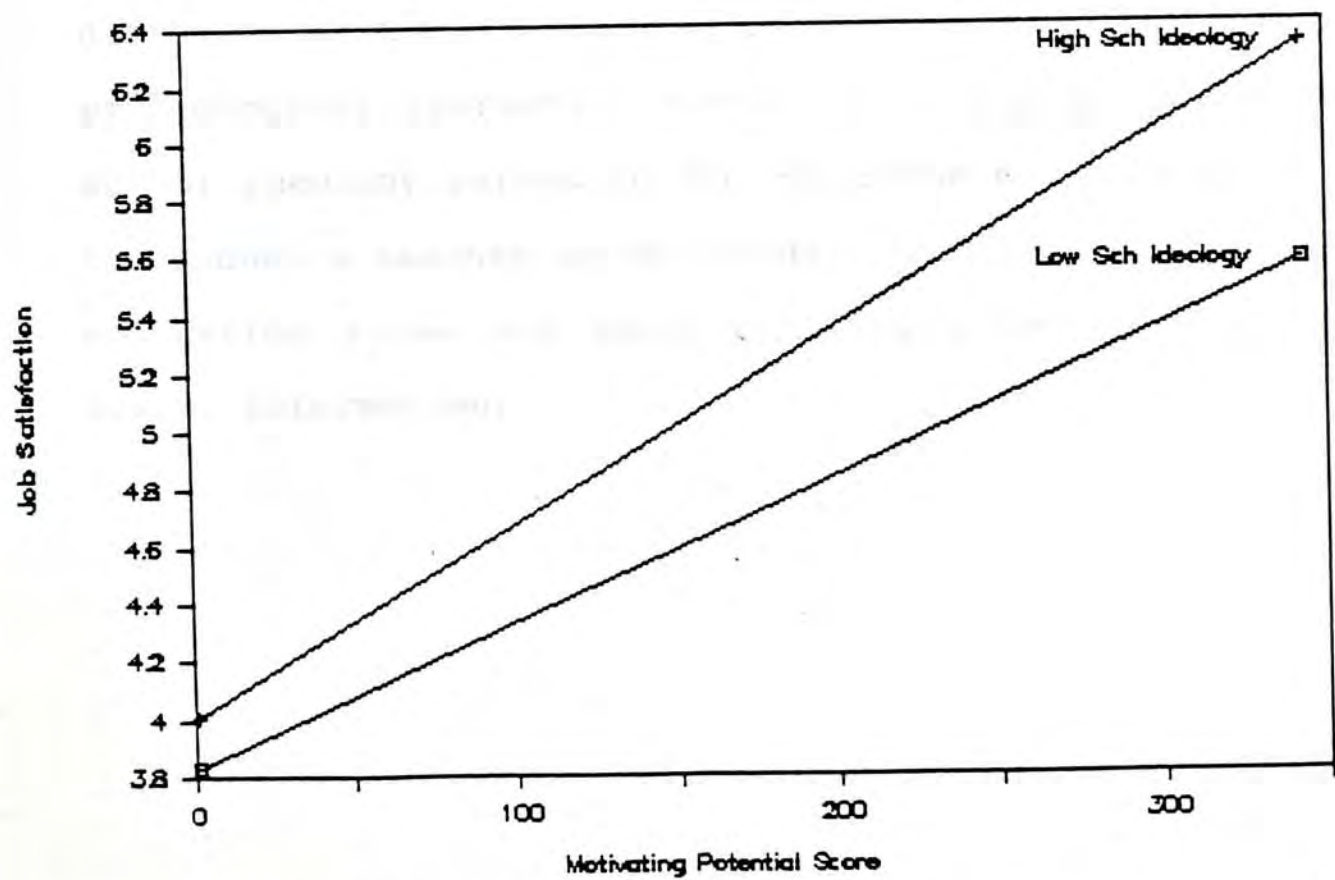


FIGURE 9. Regression Lines of Job Satisfaction vs MPS for Teachers of Low and High School Ideology Strength Groups

To sum up the major findings in Tables 19, Table 20, Figure 8, Figure 9 and the stepwise multiple regression analysis, both growth need strength and perceived school ideology strength are found to be potential moderators that can moderate the relationships between motivating potential score and teachers' behavioral outcomes in terms of job satisfaction, motivation, intention to change the school and intention to change the job. Three out of the eight possible combinations of interactions were confirmed by stepwise multiple regression.

An additional finding worth pointing out is that growth need strength and perceived school ideology strength are two considerably distinct moderators. Their correlation is found to be very weak, in fact not significant at all (correlational coefficient = $-.0132$, $N = 1067$). These two moderators may play different moderating roles as growth need strength refers to the psychological (personal) factor of a teacher while perceived school ideology refers to the environmental (school) factor of the school a teacher works inside. Further researches on their moderating roles and their combined effects may reveal more useful information.

CHAPTER 5. CONCLUSION, IMPLICATION AND LIMITATION

A. WORK CATEGORIES OF TEACHERS' WORK

Teachers' work is described in terms of work categories, time spent, degree of concern and motivating potential in this study. The antecedents and consequences of job characteristics, together with the effects of moderators, are also investigated. The following paragraphs summarize the conclusion drawn in this study. Implications of the conclusion are also presented.

In terms of work categories, teachers' work could be divided into six categories. Teachers were required to do one or more categories. It was found that more than half of the teachers needed to do four or more categories and nearly one-fourth of the teachers needed to do all six categories. Teachers' work thus were diversified. Skill variety of teachers' work may be greater than that observed in this study, therefore, the motivating potential score will be expected higher than that found in this study for those who did more work categories. However, the writer suggests that the amount of workload may be a determinant that affects whether teachers will have positive or negative attitude to accept so many different categories of work. Research on teachers' attitude taking workload into account is required.

Concerning the amount of time teachers spent on various work categories, it was found that teaching, including classroom

teaching and those related work, drew the greatest amount of time from teachers. Teaching was also the mostly concerned work category. On the contrary, miscellaneous affairs received least concern and teachers spent the least amount of time on it. The education administrators should be aware of this. The writer suggests that teachers' teaching duty should be carefully planned and allocated. Resources to facilitate teachers' teaching is required. These may include teaching aids and other assistance. On the other hand, teachers should not be bothered with non-professional miscellaneous affairs. Increase in clerical support in schools to deal with the gradually increased amount of clerical work has been voiced more and more intensively, yet no appropriate and positive response has been made. This request should not be ignored. A special situation found when comparing with other occupations was that the deviation of time spent among teachers was exceptionally great in some work categories. In the duties related to extracurricular activity, discipline and administration, the standard deviations were greater than the means. For guidance and miscellaneous affairs, the standard deviations were quite close to the means. This phenomenon may reflect different effort paid and different concern laid by teachers; or this may reflect the variation in the abilities and experience of different teachers; or it may reflect a disproportionate allocation of duty among teachers; or this may imply that no standard criteria were there in these categories of work (note that in formal teaching, the deviation in time spent was very small as formal time table laid constraints on that). Education administrators of individual schools must sort

out the true reasons behind if great discrepancy of time spent exists. Appropriate action such as reallocation of duty and helping teachers with lower ability or less experience may be required. In literature, it was found that new teachers often faced 'reality shock' as there was a great discrepancy between their expectation and the real situation of the real world (Dean & Wanous, 1983). Such reality shock significantly could influence one's desire to stay in the organization. McLaughlin, et al. (1986) found that teachers whose initial assignments are frustrating or stressful seem more likely to experience decreased commitment, confidence, & satisfaction in later years. New teachers might become 'entrapped' in the profession (i.e. remain in a hated career because of few saleable skills) in later years (Faber, 1984). A recent local study of Hong Kong beginning teachers also revealed that new teachers often faced greater number of and more intensive problems than the experienced ones (Cooke et al., 1990). They were often expected to do as good as the experienced teachers do. Very bad consequences including quitting the job may follow. Care for the novices should be highlighted in school administration.

Teachers concerned themselves very much with teaching, including the novices. Education administrators thus should allow teachers participate in the decision making in teaching related affairs. These may include the decision of who teaches which classes, selection of text books, planning of teaching schedule, or even the establishment or abolishment of subjects. At least teachers' opinions on these matters should be gathered and well considered. On the contrary, teachers concerned

themselves with miscellaneous affairs the least. These work should be made simpler. No discussion on miscellaneous affairs is required in order to save teachers' time. Centralization in dealing with such work may be more suitable.

B. JOB DIMENSIONS AND MOTIVATING POTENTIAL OF TEACHERS' JOB

Teachers' work can also be described in terms of job dimensions and motivating potential score. Overall speaking, its task significance score was relatively high and that of skill variety was relatively low. However, skill variety is suggested to be surveyed again in future since dealing with more work categories may increase the number of skills required. Averaging the skill variety scores, as done in this study, is not so appropriate. In fact, some of the correlational relationships involving skill variety were not found as expected. One explanation is that the situation found is the real case. On the other hand, the result may have been caused by an inappropriate method of computing the overall skill variety score. The writer suspects that the latter explanation is true. Compared with American norm of service work (Hackman & Oldham, 1980, p. 317) which had an average motivating potential score of 152, 'teaching' alone had quite high motivating potential score (177.07) associated with it. Teaching was very challenging. Profiles of job characteristics of each work category also revealed that teaching (and extracurricular activity) had the shape most resemble that of the whole teachers' work, showing its

important influence probably. However, when teachers' work as a whole was considered, the motivating potential score dropped to only about two-third of the American norm. Education administrators must be aware of this. Two directions of improvement are suggested. First, better environment related to teaching should be provided. Secondly, the rest work categories should have their motivating potential scores raised. To start this by redesigning teachers' work, an education administrator can find out which work category is associated with the lowest motivating potential score. Then s/he should find out which job dimension of this work category probably is too low relative to the norm (this data can be obtained in the appendix of the Job Diagnostic Survey, or if possible, generated in future local studies). S/he then may start there to see the feasibility of making improvement on it. Gradually, other job dimensions of the same or the other work category can be improved one by one, or together by an integrated plan. In this study, autonomy and feedback were identified most sensitively related to the motivating potential scores of various work categories. Therefore, in general, education administrators should allow more autonomy and give appropriate feedback to teachers. The School Management Initiatives (Education and Manpower Branch and Education Department, 1991) may be a good suggestion to improve school management in this direction. In this document, greater democracy in school management and better staff appraisal system are urged for. If appropriately done, the motivating potential score of teachers' whole work should have the chance to increase.

C. ANTECEDENTS OF JOB CHARACTERISTICS OF TEACHERS

Through ANOVA, possible antecedents including age, post, tenure (both in school and in profession) were found related to teachers' perception of job characteristics. This supports the findings in the literature. Furthermore, marital status, teaching level and perceived school ideology strength were found to be the antecedents as well. The first two of these antecedents may be unique in the teaching career. In Hong Kong, teaching career is a considerably stable job. It may fit better the married persons who may seek for stability. This statement of course needs support from empirical findings. To see that teaching upper forms is more challenging, the education administrators can try to allocate at least some upper from lessons to all teachers, including the novices, provided they are qualified and they want to have such challenge. Putting perceived school ideology strength into the antecedent category is a trial of this study and its role was supported. This calls for the notice of the importance of school climate. Teachers' perception of their job was probably affected by their perception on school ideology strength. To study the effects of different kinds of school ideology, together with its strength, may disclose much fuller understanding of how teachers perceive their work in future.

In stepwise multiple regression analysis, having administration duty or not, being a panel head or not and strength of school ideology were found to be the three strongest

predictors of motivating potential. Although the former two predictors represent personal factors, they can actually be manipulated by school administrators. Careful allocation of duty and appropriate means of teacher promotion may probably be beneficial in enhancing motivating potential of teaching career.

D. CONSEQUENCES OF JOB CHARACTERISTICS OF TEACHERS

The motivating potential scores and most of the job dimensions of the whole teachers' work were found significantly correlated with the four behavioral outcomes studied. This implies that in order to improve teachers' job satisfaction and motivation and to decrease their intention to quit their job, education administrators can try to enrich teachers' job. As job characteristics of teachers' job was found obviously stronger in predicting job satisfaction and motivation than intention to change the school and intention to change the job, this implies that increasing motivating potential of teachers' job is more effective in motivating teachers and enhancing their job satisfaction. However, equal size of effect on retaining teachers in the profession or in the school cannot be assured. The education administrators should employ additional means to achieve these ends. Extrinsic reward and contextual factors such as increasing salary, reducing class size and reducing workload (Wong, 1990) probably should not be ignored. Thus, the effects of perceived job characteristics on teachers' behavioral outcomes should be noted and greater practical significance may be found

when other relevant factors are considered as well.

In another direction, when concerning the motivating potentials of different work categories, it was found that duties of teaching was related to job satisfaction, extracurricular activity and guidance were related to motivation and guidance also related to teachers' intention to change the job. In fact, the above three categories of work are usually perceived as the traditionally positive aspects of teachers' job. Nice relationship with students can be established through appropriately performing such duties. Education administrators should take action to increase the motivating potential of these work categories. Furthermore, in order to retain teachers in the profession, education administrators should concern more on the aspect of school guidance. In fact the Education Commission Report No. 4 (Hong Kong Government, 1990) has made not a few suggestions in school guidance, but due to lacking of resources, these suggestions still remain suggestions only. Actions are must be taken in the near future.

Growth need strength and school ideology strength were found to be unrelated moderators that can moderate the effects of job characteristics on teachers' behavioral outcomes. The education administrators may want to select colleagues with higher growth need strength, try to induce teachers to pursuit more on their growth needs and to create a good and strong school climate in terms of school ideology strength. Growth need strength refers to the personal need of a teacher and the school ideology strength refers to the environmental effect of the school on teachers. This indeed is in line with the urge of person-

environment fit approach in studying job characteristics and worker outcomes. This study supports the feasibility of getting richer relevant knowledge through this proposed research approach.

To sum up, in order to induce positive behavioral outcomes of teachers in the context of job nature, the following points should be observed by education administrators. First, knowing the fundamental antecedents is the starting point to understand the unchangeable and changeable factors behind teachers' job perception. Secondly, the nature of teachers' job can be designed or redesigned with respect to the weaker work categories and/or job dimensions in terms of motivating potential. Thirdly, the strength of the school organizational ideology can be manipulated through various means so as to create an atmosphere in which teachers will perceive their job having higher motivating potential. Last but not the least, improving motivating potential of job should not be considered as the unique way of enhancing positive behaviour in teachers. Other factors need to be explored.

E. IMPLICATION AND CONTRIBUTION TO THE JOB CHARACTERISTICS THEORY

This study employed job characteristics theory as the theoretical basis to analyze the nature of teachers' job. Overall speaking, this attempt is appropriate. In addition, some modifications made in this study can serve as suggestions that may improve the theory.

The job characteristics was generally supported in this study. The theory-stated correlational relationships were confirmed. Positive correlations were found between motivating potential score and motivation as well as motivating potential score and job satisfaction. Negative correlations were found between motivating potential score and intention to change the school as well as motivating potential score and intention to change the job. Growth need strength as a moderator moderating the effects of motivating potential score and the behavioral outcomes was also generally supported. The moderating role seemed true in all correlational relationships studied and was confirmed with respect to motivation and intention to change the job.

This study responded to the suggestion of the theory by including an environmental antecedent, school ideology strength, of job characteristics. School ideology strength was found to be a significant antecedent. It was also found to be a distinct moderator (apart from growth need strength) in the job characteristics-teachers' behavioral outcomes relationships. This study thus supported the research potential of employing person-environmental fit approach in studying job characteristics and work or behavioral outcomes.

Concerning with job dimensions, this study broadened the source of feedback from job itself alone to all additional appropriate sources including the clients (students), the supervisors (principals) and the colleagues (other teachers). Feedback was found to have great predicting power on behavioral outcomes in this study, showing that it was no longer a

problematic dimension here. This suggests that modification of feedback dimension may be required. The job characteristics theory can integrate the results found in other feedback researches. Last but not least, this study also analyzed teachers' work by delineating it into various work categories. By doing so, more detailed information can be obtained and thus more precise procedures and actions can be taken to improve the motivating potential of teachers' work. This direction of assessment can be applied to other jobs, especially those jobs without clearly set work boundary and depth.

F. LIMITATIONS AND SUGGESTIONS

This study tries to explain the complicated nature of teachers' work. It is a preliminary trial certainly with some limitations. These limitations include those related to the method used and those related to the conception of the study found in the course of data analysis.

First, instead of analyzing teachers' job as a whole, this study breaks down teachers' work into six categories. However, even though teachers' work is delineated into somewhat greater details in terms of the six work categories, how actual pieces of work in each category relate to the motivating potential of that category has not been tackled. This sets a limit on the application of the findings to actual job design.

Secondly, since this is a cross-sectional survey, causal relationship cannot be attributed. As the return rate is not

100%, returning questionnaire or not may imply something in teachers' attitude and even job perception, thus the generalizability of this study to the whole population cannot be assured. Furthermore, whether the teacher representative of each school have randomly distributed the questionnaires could not be controlled and the time and situation for completing the questionnaires could not be fixed. Therefore, the reliability of the data will be somewhat discounted.

Thirdly, some complicated relationships between the moderators and the job characteristics are not dealt with in this study. In fact the moderators and the job characteristics may mutually affect each other. As time goes, the magnitude of the respective scores of these variables may change. This surely is a limitation of a cross-sectional study. However, the findings of this study are hoped to lead to greater and deeper exploration of the matter concerned in future studies.

Fourthly, although some affective outcomes of teachers are studied in relation to perceived job characteristics of teachers, it does not imply that the latter can explain or predict the former completely. There certainly are many other variables, e.g. whether the teacher is overloaded and whether teaching career is one's first career choice, have not been tackled in this study. Thus the application of the findings of this study should not be overgeneralized. Integrated studies involving more other possible relevant variables are needed.

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APPENDIX A: Tables of results of the pilot test

Percentage of Teachers Involved in Six Teacher Work Categories

TABLE A-1

Summary of the Characteristics of the Sample of the Pilot Study

Sex	9 Male	18 Females
Teaching experience	Less than 1 year to More than 11 years	
Teaching level	Mostly Upper Forms	
Rank	Certificate Master	Assistant Master
	Graduate Master	Senior Grad Master
Academic Achievement	From College of Education to University + Diploma/Certificate of Education	
Part/Full time	All except 4 are Full Time Teachers	

TABLE A-2

Percentage of Teachers Involved in the Six Teacher Work Categories

Teaching	Extracur Activity	Guidance	Discipline	Adminis- tration	Miscell Affairs
100.0	96.3	93.6	82.5	74.1	93.6

TABLE A-3

Percentage of Teachers Involved in Different Number of Teachers' Work Categories

No. of Work Categories	% of Teachers Involved
1 only	0.0
2 only	3.7
3 only	3.7
4 only	7.4
5 only	22.2
all 6	63.0

TABLE A-4

Percentage of Teachers Ranking Concern on Different Teachers' Work Categories

Rank of Concern	Work Category					
1:Most 6:Least	Teaching	Extracur Activity	Guidance	Discipline	Adminis- tration	Miscell Affairs
1	96.3	0.0	0.0	3.7	0.0	0.0
2	0.0	11.1	51.9	11.1	25.9	0.0
3	3.7	22.2	22.2	40.7	11.1	0.0
4	0.0	33.3	7.4	22.2	29.6	7.4
5	0.0	33.3	14.8	18.5	29.6	3.7
6	0.0	0.0	3.7	3.7	3.7	88.9

TABLE A-5

Relative Time Allocation of Teachers on Different Teacher Work Categories

	Work Category					
	Teaching	Extracur Activity	Guidance	Discipline	Adminis- tration	Miscell Affairs
Range of % Time Allocated	10-71	0-38	4-28	0-23	0-30	0-30
Relative Amount of Time Spent*	10	5.4	4.2	2.9	4.3	4.5

* Assume every teacher spend equal amount of total time on work.

TABLE A-6

Mean Score Related to Motivating Potential of Each Teacher Work Category

Job Characteristics	Work Category						Result of ANOVA
	Teaching	Extracur Activity	Guidance	Discipline	Adminis- tration	Miscell Affairs	
Autonomy	6.012	5.756	5.761	5.042	4.222	3.615	p<0.01
Task Identity	5.859	5.613	4.705	4.290	4.565	4.708	p<0.01
Skill Variety	5.531	5.372	5.373	4.431	4.493	2.718	p<0.01
Task Significance	6.086	5.564	5.803	5.292	4.611	3.385	p<0.01
Feedback	4.801	4.500	3.860	3.819	4.080	3.753	p<0.01
MPS	170.8	143.2	126.3	94.23	90.54	59.19	p<0.01

TABLE A-7

Summary Result of Regression Showing the Contribution of Motivating Potentials of Individual Work Categories and Overall Motivating Potential Score Respectively to Job Satisfaction and Motivation

Dependent Variable	Predictor(s)	
	MPS of Work Categories	Overall MPS
Overall Job Satisfaction	10.3	15.7
Overall Motivation	55.3	29.5

The values shown are the R^2 values

TABLE A-8

Summary Result of ANOVA of Motivating Potential Scores of Individual Work Categories with respect to Intention to Change the School and Intention to Change the Job

	Work Category					
	Teaching	Extracur Activity	Guidance	Discipline	Adminis- tration	Miscell Affairs
Intention to Change the School	ns	ns	ns	ns	ns	ns
Intention to Change the Job	ns	ns	ns	ns	p<.05	p<.05

Work Card APPENDIX B: Instruments used in the major study

Antecedents:

請圈出答案的數字。若有需要，可選一個以上的答案。

- | | 答 案 |
|--|---------------|
| 1. 性別: (1)男 (2)女 | 1 2 |
| 2. 年齡: | _____ 歲 |
| 3. 學歷: (1)師範 (2)大專 (3)認可學士學位 (4)碩士 (5)博士 | 1 2 3 4 5 |
| (6)其他(請註明) | 6: _____ |
| 4. 教育專業訓練: | |
| (1)教育文憑 (2)教育學士 (3)教育碩士 | 1 2 3 |
| (4)其他(請註明) | 4: _____ |
| 5. 職位: (1)教師(不兼行政工作) | 1 2 3 4 5 |
| (2)教師(兼行政工作) | |
| (3)科主任 | |
| (4)教務主任、訓導主任、輔導主任、課外活動主任....等 | |
| (5)副校長 | |
| 6. 工作經驗: | |
| (1)教學年數 | (1) _____ 年 |
| (2)在現校任教年數 | (2) _____ 年 |
| 7. 婚姻狀況: (1)未婚 (2)已婚 (3)其他 | 1 2 3 |
| 8. 宗教: (1)無 (2)天主教 (3)基督教 (4)佛教 | 1 2 3 4 5 6 7 |
| (5)道教 (6)回教 (7)其他宗教 | |
| 9. 主要任教班級: (1)F.1-3 (2)F.4-7 | 1 2 |

Work categories, Time allocation and Degree of concern:

下表顯示教師工作的六個主要類別：

工作類別	一些具體內容
教學	備課、授課、批改、擬卷及課程設計等。
課外活動	帶領校內校外各種興趣活動及校際比賽等。
輔導	集體、小組、及個別輔導學生，以及輔導及聯絡家長等。
訓導	懲處學生、執行校規、維持秩序及約見家長等。
行政	策劃、計劃、管理科務、校務及資源等。
庶務	文書工作、執行有關的校務指引，如收費、收發及覆核表格等。

1. 你的工作包括上述那些類別呢？
請在右邊圈出一個或多個數字。

教學	課外活動	輔導	訓導	行政	庶務
1	2	3	4	5	6

2. 每星期你花在各工作的平均時數為：
(可取至小數後一個位)

教學	課外活動	輔導	訓導	行政	庶務
_____	_____	_____	_____	_____	_____
_____ 課堂上教學		_____ 課堂外教學工作			

3. 下列標度表示關注工作的程度；請在各類工作下的空位填上你認為合適的程度數字：

1.....	2.....	3.....	4.....	5.....	6.....	7.....
很不關注	不關注	略不關注	兩者皆否	略關注	關注	很關注

教學	課外活動	輔導	訓導	行政	庶務
_____	_____	_____	_____	_____	_____

Job dimensions:

請依據以下標度在每條題目右邊的每一空位上填上合適的數目字。

1.....	2.....	3.....	4.....	5.....	6.....	7
常不真確	不真確	有點不真確	不肯定	有點真確	真確	非常真確

就你的不同工作，以下句子有多少真確？

在這類工作，.....

例：我需與他人合作。

答		案			
教 學	課 外 活 動	輔 導	訓 導	行 政	庶 務
6	4	4	3	2	2

1. 由我開始的作業，也要由我完成。

2. 我沒有主動作判斷的機會。

3. 校長、同事、學生和工作本身均能使我知道自己工作的成績。

4. 我的工作相當簡單和/或重複的。

5. 我的工作成效的好壞足以影響許多人。

6. 我沒有機會完成由始至終的整項工作作業。

7. 我需要使用若干複雜或高層次的技術。

8. 我相當自由和獨立。

9. 廣泛而言，工作本身並不十分重要和有意義。

10. 我從不能由工作本身或其他人得到工作效果的回饋。

1.	—	—	—	—	—	—
2.	—	—	—	—	—	—
3.	—	—	—	—	—	—
4.	—	—	—	—	—	—
5.	—	—	—	—	—	—
6.	—	—	—	—	—	—
7.	—	—	—	—	—	—
8.	—	—	—	—	—	—
9.	—	—	—	—	—	—
10.	—	—	—	—	—	—

Job satisfaction and motivation:

請依據以下標度在每條題目右邊的每一空位上填上合適的數目字。

1.....	2.....	3.....	4.....	5.....	6.....	7
極不同意	不同意	略不同意	中立	略同意	同意	極同意

就你在不同工作上的感受，你對以下句子有多少同意？

例：在這類工作，我與他人合作愉快。

- 1. 在這類工作，當工作表現好時，我會提高自我的評價。
- 2. 一般而言，我滿足於這類工作。
- 3. 在這類工作，我發現自己工作得差勁時，我會不愉快。
- 4. 我常常想及辭掉這類工作。

答 案					
課					
外					
教	活	輔	訓	行	庶
學	動	導	導	政	務
6	5	5	2	4	6

—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—

Growth need strength:

請圈出你期望你的工作擁有下列特性的程度。

我期望教師工作，整體而言，.....

- 1. 工作刺激及富挑戰性。
- 2. 工作上有機會表現獨立的思考和行動。
- 3. 工作上有學習新事物的機會。
- 4. 工作上有創新和想像的機會。
- 5. 工作上有個人成長與發展的機會。
- 6. 工作帶來'值得'與'有成就'的感覺。

答 案					
略	有				極
不	點			很	為
期	期		期	期	期
望	望	望	望	望	望
1	2	3	4	5	6
1	2	3	4	5	6
1	2	3	4	5	6
1	2	3	4	5	6
1	2	3	4	5	6
1	2	3	4	5	6

Index of school ideology:

請就下列一些關於你學校或你個人的情況，圈出合適的答案數字。

	答 案						
	極 不 真 確	不 真 確	略 不 真 確	兩 者 皆 否	略 真 確	真 確	非 常 真 確
1. 這學校代表著社會上一些別具特色的事物。	1	2	3	4	5	6	7
2. 關於教育應是怎樣的，多數成員有明確一致的觀念。	1	2	3	4	5	6	7
3. 這學校培養出一群與別不同的教職員。	1	2	3	4	5	6	7
4. 對多數成員來說，這學校在社會上沒有明確使命。	1	2	3	4	5	6	7
5. 學校成員非常關心學校的傳統及校風。	1	2	3	4	5	6	7
6. 關於如何達成學校目標，多數成員的看法清晰一致。	1	2	3	4	5	6	7
7. 校內時常流傳著有關過往或現在的成員的感人事蹟和成功的故事。	1	2	3	4	5	6	7
8. 對於學校在社會的角色，多數成員有明確一致的信念。	1	2	3	4	5	6	7
9. 校內時常流傳著一些反映出學校精神或教學理想的格言佳句。	1	2	3	4	5	6	7
10. 多數成員抱有相同的教學信念。	1	2	3	4	5	6	7
11. 我經常想及轉教別校。	1	2	3	4	5	6	7
12. 我經常想及辭掉教職。	1	2	3	4	5	6	7

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